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ABSTRACT

The purpose of the hearings presented in this Congressional document was to highlight the enterprising, inventive, and imaginative ways that people use public information and ways that agencies disseminate it. Witnesses were called who could provide information about: (1) how federal data is used by people who make genuine contributions to the nation's economy and democratic processes; (2) the importance of making information available in electronic formats; (3) innovative and inexpensive ways of making information available; (4) the needs of users of federal information; (5) the techniques and technologies of information access; and (6) the impact of the high cost of public information. This report includes statements from 17 witnesses representing a variety of agencies, such as federal agencies, including the General Accounting Office; the Association of Research Libraries; the information industry, including USA Today and DIALOG; nonprofit organizations, such as the Regional Contracting and Assistance Center, which disseminates public information to assist in economic development; and public interest organizations, including OMB Watch, a research, educational, and advocacy organization that monitors Executive Branch activities. Also included are prepared statements submitted for the record by the witnesses and four appendices, which include three additional statements, an article from the Wall Street Journal, working notes, and a letter. (KRN)

CREATIVE WAYS OF USING AND DISSEMINATING FEDERAL INFORMATION

HEARINGS

BEFORE THE

GOVERNMENT INFORMATION, JUSTICE, AND AGRICULTURE SUBCOMMITTEE

OF THE

COMMITTEE ON GOVERNMENT OPERATIONS HOUSE OF REPRESENTATIVES

ONE HUNDRED SECOND CONGRESS

FIRST AND SECOND SESSIONS

JUNE 19, 1991, FEBRUARY 19 AND JUNE 4, 1992

Printed for the use of the Committee on Government Operations

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CREATIVE WAYS OF USING AND DISSEMINATING FEDERAL INFORMATION

WEDNESDAY, JUNE 19, 1991

House of Representatives,
Government Information, Justice,
and Agriculture Subcommittee
of the Committee on Government Operations,
Washington, DC.

The subcommittee met, pursuant to notice, at 9:30 a.m., in room 2203, Rayburn House Office Building, Hon. Robert E. Wise, Jr. (chairman of the subcommittee) presiding.

Present: Representatives Robert E. Wise, Jr., Patsy T. Mink, Collin C. Peterson, John W. Cox, Jr., Al McCandless, Steven Schiff, and Bernard Sanders.

Also present: Lee Godown, staff director; Robert Gellman, chief counsel; Aurora Ogg, clerk; and Monty Tripp, minority professional staff, Committee on Government Operations.

OPENING STATEMENT OF CHAIRMAN WISE

Mr. Wise. This hearing of the Government Information, Justice, and Agriculture Subcommittee on the creative ways of using and disseminating Federal information will come to order.

If knowledge is power—and this is truly the information economy that we read about—then this is a very, very timely hearing. Today's hearing is on creative ways of using and disseminating Federal information.

This will be the first in a series of hearings to highlight enterprising, inventive, and imaginative ways that people use—and agencies disseminate—public information. There are several broad purposes to these hearings.

First, I hope to illustrate how real Federal information is used by real people who make real contributions to the Nation's welfare, economy, and democratic process. Making Federal data available to the public is not simply an academic exercise. It makes a difference.

Second, I expect to demonstrate the importance of making information available in electronic formats. The value of information is enhanced when it is released in a way that permits others to use it effectively.

Third, the hearings will identify innovative and inexpensive ways used by agencies used to disseminate Federal information. Since the Federal budget will not support all of the fancy electron-

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ic dissemination methods that some might like, we have to learn to do things at a low cost.

In the last Congress, some of these issues arose in the context of the Paperwork Reduction Act reauthorization. The information part of that legislation became bogged down in an unrelated dispute, and the effort to reform dissemination laws remains in limbo at this time.

OMB has announced plans to revise Circular A-130 on management of Federal information resources. That could be a potentially positive development, but I will reserve judgment until more details become available.

While the broader dissemination policy questions are never very far in the background, our focus here today is narrower. We need to be reminded from time to time why the battle to preserve effective public access to Federal data is important. We need to keep in touch with the users of Federal information.

I have one other point that I would like to raise, and it relates to the price of information. I recently received a pamphlet from the Organization for Economic Cooperation and Development. It advertises the availability of all types of economic statistics in wonderfully convenient computer formats.

I was very impressed with this pamphlet until I looked at the price. A single computer disk cost $265. Another series of monthly disks cost $1,300 per year. That's a lot of money to a lot of people.

The OECD is an international organization and does not operate under the same rules as the Federal Government. But it is apparent that selling Government information at a high price or with restrictions can effectively deny some people the ability to acquire or use the data.

Selling Government information for profit is inconsistent with existing law and is bad public policy. When planning for information dissemination, we need to remember that price can be just as important as availability. Conversely, there's not going to be much availability if you price it right out of the market.

So these hearings—this is the first of several—will look to address these issues. We have a distinguished witness list. We're looking forward to a very, very fruitful hearing.

I would like to advise members and members of the audience that at the point we have a quorum, if that point arrives, then what we will do is immediately recess the hearing for, hopefully, all of about 1 minute to do some committee business to approve two committee reports, and then we'll go right back into the hearings. So don't stray far in that event. Mr. McCandless, any open statement?

Mr. McCANDLESS. Thank you, Mr. Chairman. I do not have a formal statement. I think it's important that this Government Operations Committee, as well as other committees in the Federal Government, look to innovative ways of generating interest in our younger generation in the process of learning, and I congratulate you for bringing this program forward so that more people can see it.

Unfortunately, this morning we have the full committee banking markup, which started about 5 minutes ago. I was in hopes we would have a quorum here so that we might pass our two legislative reports, however I'm going to have to depart, unfortunately.

Mr. **Sproull.** I have a CD-ROM disk with a lot of the banking information that can be reformatted. [Laughter.]

Mr. **Wise.** Our first panel will be Jerry McFaul, computer scientist with the U.S. Geological Survey from Reston, VA; Randy Jackson, JEdI spokesman from Westwood, CA; and James D. Sproull, Jr., the JEdI teacher coordinator of the U.S. Geological Survey in Reston, VA.

Gentlemen, we're delighted to have you. It is the practice of this subcommittee, so as not to prejudice any witness who may ever appear before it, to swear in all witnesses. Do you have any objection to that?

[Chorus of no.]

Mr. **Wise.** If you would stand and raise your right hand?

[Witnesses sworn.]

Mr. **Wise.** Why don't we start in the order in which I read your names. Let me just say to all the witnesses that your statements in their entirety are already made a part of the committee record. So please feel free to summarize it any way you wish.

STATEMENT OF JERRY McFAUL COMPUTER SCIENTIST, U.S. GEOLOGICAL SURVEY, RESTON, VA

Mr. **McFaul.** Good morning, Mr. Chairman. My name is Jerry McFaul. I'm a computer scientist at the U.S. Geological Survey, and a principal investigator of optical storage for the USGS.

I'm also chairman of an organization called SIGCAT, standing for the special interest group on CD-ROM applications and technology. This is a governmentwide—actually worldwide—user group with over 4,600 members with the aim of spreading the information about CD-ROM to a wide and diverse audience.

As you probably know, the USGS collects and interprets many, many different types of data, and this information is used for, basically, the well-being of our Nation. We began investigating CD-ROM over 5 years ago with the intent of using this technology to allow us to disseminate in a very economical and very usable form the information that we had collected over the years.

The dissemination of large data bases has traditionally been hampered by the only available means up to CD-ROM; that is, magnetic tape. CD-ROM has dramatically improved the situation and has allowed us and other agencies to disseminate information on these convenient, inexpensive, small plastic platters called CD-ROM. These data bases actually can be mainframe size and quite often are, and thus allow access to these mainframe-size data bases on PCs and work stations.

Education is one of the priority objectives of the President and of the Secretary of the Interior. The Secretary has been very supportive of the USGS in the efforts in this area, and the USGS has historically been active in education outreach, particularly in programs geared toward developing Earth science materials.

In this vein, about 1½ years ago, the USGS initiated a project to take this technology of CD-ROM and to do something for the educational system. We had already been placing large data bases onto

CD-ROM, as have many of the other science agencies, but we thought if we had a concerted effort between the science agencies to take this information and take our products on CD-ROM and factor in a large component of teacher expertise, we could perhaps produce something meaningful and worthwhile for the educational environment.

This is basically what happened. We, early on, had the advantage of having many teachers in the area work with us to shake down the project, to test the idea, and it made sense. The teachers agree that having this information available to them would be very useful in our classroom environments.

The JEdI project, standing for the joint education initiative, was born about 1 year or 1½ years ago and evolved into what we think a very meaningful exercise in the use of CD-ROM technology, to take existing information from Government agencies and make it available to the educational public.

In the past, these types of data bases have virtually been inaccessible to the teacher and educational community because they were so big and they were typically resident in large mainframe computers. CD-ROM has changed all that, again, by giving access to these real world data bases to desk top computers and to the classrooms.

CD-ROM technology, as I said, is the key to this whole project, because it allows a very inexpensive medium to be used to disseminate information. After about 6 months into the project, we actually had a workshop of 20 teachers at the U. S. Geological Survey, working to put together teachers' activities books around these disks.

We had made a pair of disks by that time, and the 20 teachers that worked with us for 3 weeks really got into the information on the disks and produced an activity book at that point which accompanies the disks and makes a very useful and worthwhile set of educational materials.

We've since produced the third disk, which basically is the index of the other two disks and contains a means to access and explore the entire set of materials interactively, and Mr. Sproull will be demonstrating that in a minute.

The future of JEdI is very promising. The University of Maryland has now taken the leadership role in this project, and we look very favorably on this situation because we intend to continue to be involved as an advisor on the project, and to provide additional data bases from the Federal Government.

The University of Maryland, of course, is the ideal institution to continue to provide updates to the technology, to provide teacher training classes, to really make the next generation of JEdI materials happen.

We'd like to see and suggest that additional CD-ROM applications come from other agencies, not just the science agencies, but many of the other ones, such as the Patent and Trademark Office and the Census Bureau, NTIS, and GPO. All of their disks should be considered for inclusion in the educational project called JEdI to allow additional data from all of these diverse agencies to become material for use in additional and future JEdI teaching applications.

I'd like to introduce Jim Sproull, who has been our teacher coordinator throughout the entire JEdI project to give you a feeling for exactly what the JEdI information looks like and a perspective from the teacher as to what this material really means to the teachers and the kids.

[The prepared statement of Mr. McFaul follows:]

STATEMENT OF E.J. (JERRY) MCFAUL, COMPUTER SCIENTIST
U.S. GEOLOGICAL SURVEY, DEPARTMENT OF THE INTERIOR
BEFORE THE
SUBCOMMITTEE ON GOVERNMENT INFORMATION, JUSTICE, AND AGRICULTURE
COMMITTEE ON GOVERNMENT OPERATIONS
HOUSE OF REPRESENTATIVES
JUNE 19, 1991

Good morning, Mr. Chairman. My name is Jerry McFaul. I am a computer scientist at the U.S. Geological Survey (USGS) and a principal investigator of optical storage for the USGS, focusing on Compact Disc-Read Only Memory (CD-ROM) technology. I also chair the government's Special Interest Group on CD-ROM Applications and Technology called SIGCAT, which supports a worldwide membership of over 4,600 users and producers of CD-ROM technology. The USGS has always been in the forefront of the government's use of CD-ROM and in 1986 established SIGCAT to share this knowledge and experience with other government agencies.

The USGS collects and interprets data and disseminates information on land, water, mineral and energy resources, and geologic hazards that are critical to the well-being of our Nation.

Dissemination of large databases of Federal information has traditionally been cumbersome because it typically has involved the use of bulky 9-track magnetic tapes. CD-ROM technology has dramatically improved this situation by allowing agencies to disseminate their information on convenient, inexpensive plastic discs. Although small in size (approximately 4.78 inches in diameter), these compact discs can hold mainframe-size databases and allow them to be accessed on desktop computers and workstations.

The Joint Education Initiative - JEdI

Education is one of the priority objectives of the President and of the Secretary of the Interior, Manuel Lujan. The Secretary has been very supportive of USGS efforts in this area. The USGS has historically been active in education outreach, particularly with programs geared toward developing earth science materials to support school curricula. We try and bring the excitement of science into the classroom through projects such as the Joint Education Initiative (JEdI). Begun last year, JEdI is a joint initiative involving the USGS, the National Aeronautics and Space Administration and the National Oceanic and Atmospheric Administration. The objective of JEdI has been to develop a set of educational materials to enhance and promote the teaching of earth science at the pre-college level. The unique aspect of this project lies in the fact that these teaching materials incorporate many of the actual databases used by earth scientists and environmental researchers in the various agencies. In many cases, these are the same databases used to study such critical global issues as the greenhouse effect, the depletion of the ozone layer, natural hazards, and coastal erosion.

In the past, analysis of these types of earth-science databases has required the use of large, expensive computers. However, through the use of today's powerful microcomputers along with the CD-ROM storage medium, the analysis of earth science databases can now take place on a desktop. The Joint Education Initiative (JEdI) Project was designed to take advantage of this "downsizing" trend in earth-science computing and allow teachers and students to access the same databases and software analytical tools that are currently in use throughout the professional earth-science community.

The JEdI Project, only 6 months after its inception, brought 20 teachers into the USGS for 3 weeks to mold the "raw materials" of data and software into a series of teaching activities. These activities use real-world data and the software tools contributed by the participating agencies to convey concepts and relationships associated with earth and space science. JEdI also helped establish close links between the scientists involved in the project and the workshop teachers in an effort to foster the transfer of knowledge from the science agencies into our schools.

Current Status

JEdI has now achieved its first goal of producing a complete set of teaching materials, which consists of three CD-ROM discs and an activities workbook. These materials are scheduled to be distributed free to over 500 schools around the country. Another 1,000 sets will be made available for purchase at $30 plus shipping. The next 6 to 12 months will constitute the evaluation period for these materials. In addition, leadership of JEdI will be transferred to the University of Maryland to provide support and coordination on a national level. The USGS will continue to participate in JEdI, providing more databases and supporting the development of additional JEdI educational materials.

The Future of JEdI

If nothing else, JEdI has uncovered a need on the part of our Nation's teachers for real-world scientific databases. This need is being met in part by taking advantage of ongoing government CD-ROM efforts. With the guidance and assistance of teachers, JEdI has taken the many databases and software programs developed in the government's scientific agencies and repackaged them for the educational community. The enthusiasm on the part of the participating teachers seems to indicate that this effort has been worthwhile.

What happens next? One possible scenario is to use JEdI as a model throughout the Federal government and allow increased access to the vast array of data and software emanating from the Federal sector on CD-ROM discs. JEdI materials would continue to provide a "sampling" of these data and software along with corresponding activities developed by participating teachers. But the original databases that agencies continue to place on CD-ROM should also be made available to schools that wish to establish in-depth "CD-ROM libraries" in these areas. These libraries need not be limited to the scientific disciplines. There is a rich storehouse of information now becoming available on CD-ROM from such agencies as the Census Bureau, the Patent and Trademark Office, the National Institute for Standards and Technology, the Government Printing Office, and the National Technical Information Service, to mention but a few. For a very minimal incremental cost, the CD-ROM products produced in these organizations could be made available to schools across the country.

To date, more than 30 companies have donated over $180,000 in goods and services (including 22 complete computer systems) to the teachers and schools participating in JEdI. This project has shown how the spirit of volunteerism and cooperation between the public and private sectors can be combined to help improve our educational system. As one teacher remarked, "The JEdI project has brought real-world scientific databases right into the classroom."

Mr. McFaul. Jim.

STATEMENT OF JAMES SPROULL, JR., JEdI TEACHER COORDINATOR, U.S. GEOLOGICAL SURVEY, RESTON, VA

Mr. Sproull. Good morning, and thank you, Mr. Chairman. My name is Jim Sproull. I'm the teacher coordinator for the U. S. Geological Survey's project JEdI, or joint education initiative.

I have recently taken a leave of absence from teaching to undertake this project and be involved in the national implementation of what I consider a great thing for education. In a little bit, I'll be giving you a demonstration of some of the capabilities of these disks and what we can do for teaching students and teachers.

I'd like to, at the outset, say that what you will see today is a very small part of the capabilities that this system has to offer. Time does not permit going into depth.

As Jerry mentioned, JEdI was conceived, nurtured at the USGS. They brought in National Oceanographic and Atmospheric Administration, National Aeronautics and Space Administration, some computer support, and other industry support. We brought in teachers from the local area and academia. We all got together, sat down and said, "How can we make this happen? How can we make this work?"

Out of that, we had the concept of getting data bases put together on a set of three disks and a teacher activity book. That teacher activity book, as Jerry mentioned earlier, sprang out of a workshop we housed at the Survey last summer.

The activity book only addresses a few of the data sets, because we feel it's impossible to address everything. There's just too much to write about at this time. We feel JEdI is receiving overwhelming interest and support.

I have been around the country a number of times to various teaching and educational groups, and I've identified five reasons why I think the interest is overwhelming.

The JEdI data sets are germane and properly supported, meaning teachers were directly involved from the start of the project, they helped identify the data sets, they helped plan the summer workshop, and they created and wrote the classroom activities.

At this point, there are teachers out there testing the JEdI data sets, and during the last, I guess now, 1 month, over 400 teachers have received a set of these disks, and they're beginning to plan to work those into their curriculum for next year.

Second reason, JEdI sets are extremely large. They allow for real and meaningful scientific inquiries. After the scientists said, "Look at our data sets and tell us what you think," the teacher said, "Let's go for depth versus breadth," and that's a very important point I'd like to make here today. As a teacher for the last 17 years, I've always been very disappointed in what we had available from the textbooks and curriculum materials. Sources usually present a superficial treatment of concept, the data have been sanitized, edited, and marketed.

Sometimes these exercises present questionable conclusions for ease of presentation or for avoiding conflict. Present laboratory exercises take a lot of the fun, excitement, and wonder out of teaching and learning. With the depth of data available on these JEdI disks, there is no limit to what our students can do.

The third reason is data sets are supported by materials that are being tried and tested in the classroom, that is our teacher activity book. When I demonstrated this to a meeting hosted by the National Oceanographic and Atmospheric Administration, Dr. Robert Tinker, who is the Director of Technology, Education, and Research Centers, said JEdI is the Rosetta Stone for education.

He made a very particular point when he said "education." It is not just science education. Our data sets are so broad and "real life" that it treats education the way it should be, that it is an integrated approach to the discipline; it is not divided into little groups. And JEdI provides that means to operate an integrated curriculum.

JEdI data sets retain the scientific integrity of the data, a subtle fact that it is not just changing the data or making it something else, but not properly documenting where the data came from. These are scientific data sets. Now, teachers can answer the question where that came from, how did they get it, and what did they do with it. Until this point, we could not do this.

And JEdI data sets are inexpensive. I'd like to make sure that the transcript gets changed. My testimony says each CD-ROM; it should say each JEdI set. The three disk set contains about 2,000 megabytes of data. That's roughly the equivalent of 1 million pages of text, or 18 trees' worth of pulp.

Yet these costs are being kept very low through our government and industry support. Each JEdI desk set will cost about $30. Many of these have already been given away through our project. The contributions from the computer and other industry and government and teachers have made these a very worthwhile product, a first of its kind that is being distributed for a very low price.

We're now moving into another stage. University of Maryland is going to begin to take the initiative of this project, and we're looking forward to implementing JEdI even further on a national scale. At this time, I'd like to give you a very short demonstration of, again, some of the capabilities of this system.

I've already entered into this program quite a few levels. I'd like to stress that to get to this point, you have the ability to bring up any area in all of North America, meaning from England to the Siberian Peninsula to Africa to a little bit of South America, up to the North Pole. It's a broad area.

We have centered in on just the United States. This is a topography image of the United States. The colors here mean how high or low that particular area is above sea level. The box which is in the center of the screen, I'm going to move to the Galveston Bay area, and I'm going to ask the computer to bring that up.

Now, this will take a minute to be read into the computer and come up on the screen, so I'll talk about it as it comes up. The second time this image comes up, it will be a lot quicker. It is being read off of a data file into the computer as an image file, and that's another important aspect of this.

The images that you see here today are being created from data. They were not stored as pictures, they were stored as numbers, and those numbers bring up the image. We can manipulate these data in a number of different ways.

This darker green area is from sea level up to 50 meters above sea level, roughly 150 feet. The lighter green is 50 meters to 100 meters, and so on. This area here is not water. It is the bathymetric data of the Gulf of Mexico. It means how low or how deep the Gulf of Mexico is, and any value that has the light blue is anywhere between 0 to 100 meters.

Naturally, if you're right on the coast and you go inland, you'll probably start at sea level, and you'll get higher until you get to this point, and then you'll get up to 51 meters and so on.

The dark areas are a very important thing that have been missing in our educational materials. NOAA and the U.S. Geological Survey, who have put this data set together, cannot really truly agree on what these data mean as far as sea level. The definition of mean sea level is a very important definition. It's a legal definition that is hard to define these areas can be in subsidence, flooding.

Maybe they do not trust some of the data they do have. Rather than commit to that, they will leave it as a black area. Textbooks would take that and color it to be dark green or light blue and leave no mystery to why it is there.

The area we're going to look at in particular is the Galveston Bay area right here. Galveston Bay's length from here to here [indicating] is roughly 40 kilometers, let's say about 30 miles.

To give yourself a better orientation, I'll ask the computer to put in some boundaries. We're going to put in a coastline boundary, and I'll tell it to do it in yellow, and I'll say to do it in detail, and we'll also put in the State boundaries in white.

Now my image comes back much faster because it's been saved as an image file on the computer, and we see the Texas/Louisiana State line and the other part of the Louisiana State line, and in a second, you'll see a yellow line that will depict present-day coastline.

Sharp-eyed kids will be able to say, "Mr. Sproull, if that's coastline, why is this blue? And if that's coastline in there, why isn't it blue?" Well, I don't know. I can't answer that. There's no way I, as a teacher, can keep up with all of the data that's out there, but we certainly now have the ability to ask more questions from the data. Up until this time, the data was there, and that's it, or a picture is there, a map is there.

Now, what I'm going to do is change your perception of sea level here. I'm going to model a 1 meter flood in this area, well within the capability of even a moderate hurricane in the Gulf of Mexico.

What I'm going to ask it to do is start at the very, very lowest depth and paint a nice color blue up to 1 meter above sea level, but before I do that, I would like to ask you, Mr. Chairman, and everybody else in the room to make a forecast as to how far sea level will push back the present day coastline.

The yellow line will stay, but how far will the dark blue go back? Will it go back to here, or will it just be along the coast? Will it be somewhere in the middle? This is 40 kilometers, roughly 30 miles from here to here, and 1 meter is roughly from the floor up to about waist level.

Mr. Wise. Because I went to the University of Houston and lived through a hurricane or two there, so then, if that's Galveston Bay, so Houston is going to be about 50 miles in?

Mr. Sproull. Houston is right about there, sir.

Mr. Wise. Where's the ship channel, then?

Mr. Sproull. We probably don't have the resolution for that on this. We don't get the detail for that.

Mr. Wise. OK. I got it.

Mr. Sproull. OK?

Mr. Wise. I just want to see how quickly it will get to my old apartment complex. [Laughter.]

Mr. Sproull. If you're now thinking about how far back it is, then just do it in, maybe, if it's a 1 meter, a 10 meter, 100 or 1,000 meters back from that yellow line.

Now, I'll ask the computer to go back to the image to change the image, and I'm going to select a new color pallet. This color pallet tells me what the colors mean for elevation. That dark blue color I'm going to use has been reserved for 1,000 to 2,000 meters below sea level. The computer number of that is No. 2.

My cursor here is parked at negative 423 or 423 meters below sea level. I'll take command of the cursor and move it up in increments until I get close to sea level. It is now at 16 meters above sea level, and now I'll use my minus key to make it a little bit more sensitive so I can move it about 1 meter at a time. I'm now at 1 meter.

Now I tell the computer to drop off that color 2 again, and this area has now changed to a nice, dark blue. Now, it's time to figure out how those forecasts come out. Anywhere you see dark blue would be flooded by a 1 meter flood.

For present day coastline, the yellow line will come in, in just a second. We'll first see the State line. It will be about in here, and the coastline, the yellow line will come in. Remember, the distance from here to here is about 40 kilometers, 30 miles.

It's hard to get kids to realize what change is. They come to me every year quite indignant that a northwester has eroded their beach homes. They don't understand that man is on this planet as the guest of nature. They don't understand change. With this, we can interrogate any coastal area in the United States and come up with a very good profile of its acceptability to coastal flooding. This is a very powerful tool.

Very quickly, I will leave this and show you yet another capability of this system, and we'll leave the Earth and go very quickly out to the solar system using Voyager. We have a number of Voyager images on this disc.

This particular one is of the Moon Io, which is a Moon of Jupiter. Now, I'm going to bring this back up one more time so we can see a little bit larger.

Up until this point, you can get these images or pictures, if you will, on video tape, 35mm slide or even video disk. What I'm going to do now, and what I've done with the coastal flooding, you can't do anywhere other than what we have here.

I'm going to use the computer to do a couple things. I am going to put the cursor on the screen, move it around a little bit, and lock it in and zoom in on that area that I had the cursor sitting, and that bulge right about here is a volcano on Io.

Io is a very active Moon. In fact, one of the volcanos has an altitude above the surface of Io that goes 2,500 kilometers above the surface. That's roughly halfway across the United States.

What we can also do is ask it to interrogate its light value so we can further analyze this. We are seeing the colors not as topography, but the ability of light to be reflected off this Moon, and we now have a histogram showing that these values in here are our background, and the values in here are our main image.

What can we do with this? We can ask it to ignore everything above and/or everything below this in here and everything above in here and just focus on this narrow band of light coming off Io.

So I'm going to lock that in, and then I redisplay it, and what we found is we've now highlighted this volcano into coming out instead of two colors we now have four or five colors. We're able to focus on things, zoom in very closely, and see things we wouldn't normally see.

Could I have the lights, please? I will leave you with the memory of the power of what we can now do in the classroom, what a normal kid anywhere in this country, possibly anywhere in this world, for a very small investment of computer technology in CD-ROMs, can do.

It boggles my mind as to what kids can do at science fairs. Consider what we know about kids right now. They spend at least the same amount of time watching high tech TV as they do in their classroom. They take for granted our ability of high technology. The Iraq war pointed that out.

Kids are very blase about the knowledge and the technology you had to do certain things, and they assume there are no changes or risk in life because their classroom experience is not structured to show them otherwise. We can change that.

In most classrooms today, our children and future leaders are being taught in antiquated environs by teachers who are expected to turn on 130 kids in 47-minute time units. It's not fair to ask these people to accomplish such a task without help.

Teachers with whom I work are asking for an educational bullet, and I believe we have one. Thank you.

[The prepared statement of Mr. Sproull follows:]

STATEMENT OF JAMES SPROULL, JEDI TEACHER COORDINATOR
U. S. GEOLOGICAL SURVEY, DEPARTMENT OF THE INTERIOR
BEFORE THE
SUBCOMMITTEE ON GOVERNMENT INFORMATION, JUSTICE, AND AGRICULTURE
COMMITTEE ON GOVERNMENT OPERATIONS
HOUSE OF REPRESENTATIVES
JUNE 19, 1991

Good morning Mr. Chairman. My name is Jim Sproull. I am the Teacher Coordinator for the U. S. Geological Survey's (USGS) Joint Education Initiative (JEdI). I recently took leave from a teaching career of 17 years in order to participate in the national implementation of JEdI. As part of the first stage of this implementation, we have just successfully completed an important pilot project, and I thank you for the opportunity to present to the subcommittee aspects of the JEdI project from the teaching perspective and a brief demonstration.

JEdI, conceived and nurtured at the USGS, brings together the National Oceanic and Atmospheric Administration (NOAA), National Aeronautics and Space Administration (NASA), computer and support industries, and teachers and academia for the primary purpose of making actual scientific data available for creative and innovative science education. These data include satellite images showing the changes in Yellowstone National Park following the forest fires of 1988 and information on atmospheric ozone depletion. The data are placed on CD-ROM's (compact disc-read only memory) where they are combined with computer access, display, and analysis software programs that enable teachers and students to perform actual scientific research.

JEdI is receiving overwhelming interest, support, and positive response from students, teachers, and other members of the education community. The reason for this support is five fold:

1. JEdI datasets are relevant and properly supported;
2. JEdI datasets are extremely large, allowing for real and meaningful scientific inquiries;
3. JEdI datasets and support materials have already been tried and tested in the classroom;
4. JEdI datasets retain the scientific integrity of the data; and
5. JEdI datasets and accompanying materials are inexpensive.

I will address each of these points from the teacher's perspective.

1. From the start, teachers were directly involved in the design and implementation of the JEdI project. Teachers helped identify the datasets to be included on the discs and planned the summer workshop, where teachers created, developed, and wrote 11 classroom activities which support JEdI materials. The direct input of these teachers has made JEdI a unique, viable, and realistic endeavor in the educational community. During the last three weeks, more than 400 teachers, administrators, and curriculum specialists each have received a set of three JEdI discs to be used as our Beta test sites. The Beta sites will provide further tests of the discs and associated JEdI Teachers' Activity Book as well as feedback on JEdI's usefulness in the classroom.

2. After viewing and "testdriving" the datasets in early 1990, our consulting teachers expressed a strong opinion that the depth of the scientific data should not be sacrificed for breadth or boring tutorials. This mirrors my own experience in the classroom. I have been very disappointed with the available textbooks and curriculum materials. These sources usually present only a superficial treatment of a scientific

concept; the data have been sanitized, edited, and marketed. The present laboratory exercises and textbook lessons take much of the wonder, excitement, and discovery out of science. With JEdI, classroom teachers can now confidently present a topic for examination and discovery from the raw data and do not have to depend on simplifications found in today's normal curriculum materials. With this depth of data, there is no limit to what students can do.

3. The major goal of this project was not to collect datasets on CD-ROM--it was to improve science education through classroom activities developed for these datasets. Our 20 JEdI consulting teachers had little difficulty in demonstrating how applicable and viable these data are in the classroom. During our three-week-long National JEdI workshop held at the USGS last summer, the teachers created, developed, and wrote 11 classroom activities. In demonstrating these activities to teachers all over the United States, I have received an enormous number of positive comments. Dr. Robert Tinker, Director of Technology Educational Research Centers and an international leader in the educational technology community, said "JEdI is the Rosetta Stone for education." It is important that he used the word "education" instead of "science education." The JEdI Project presents real, broad, and deep datasets of interest to all disciplines. Teachers and students using the JEdi discs and activities quickly find themselves using math, science, communication skills, problem-solving skills, and history as tools to grasp a better understanding of our world and society. JEdI provides the means by which integrated curriculum initiatives can be applied to education in a natural and real-life setting. What people like yourselves, scientists, and business and industry people do on a daily basis--problem solving--can now be thoroughly woven into the fabric of the curriculum.

4. The data's scientific integrity, including a complete documentation of it's source and meaning, is as important as its availability. Data integrity is recognized as a critical feature within the scientific community but is too often absent in

science education. In many current classroom laboratory activities, subsets of data are presented without documentation about the data's origin. In textbooks, a photo caption may read "courtesy of NOAA," without describing exactly where the data came from, how they were obtained, and what processing or manipulation has been performed. The JEdI datasets carry this information as an integral part of the data.

5. Each JEdI CD-ROM contains about 2,000 megabytes of information--the equivalent of 1 million pages of text or 18 trees worth of paper--yet the cost to schools of each 3-disc set will be about $30. Through JEdI, the government has begun to share its wealth of scientific information using a medium that costs a few dollars per disc to produce. Significant additional support was received from over 30 companies, which provided professional services, equipment, and products worth thousands of dollars. These contributions have enabled the project to produce a first-of-its-kind educational product to be distributed at a low unit price. JEdI is now being used as a model for other information sharing initiatives.

With completion of its initial pilot-project stage, JEdI is moving forward under the leadership of the University of Maryland. The University plans to build the effort into a full-scale national project, expanding the initiative to include more datasets, more classroom activities, and greater distribution in to the hands of science teachers across the country.

DEMONSTRATION:

Today, I am going to show you two different series of images. These images represent less than 1% of the total data and imaging capabilities available to classrooms on the first JEdI discs, a set of 3 CD-ROMs. Please bear with me as I briefly describe something which is seemingly limitless and endlessly fascinating.

1. The first series of images is a model of coastal flooding. In the accompanying JEdI Classroom activity, students use the computer to validate their predictions of the extent of flooding that would be caused by a 1-meter rise in sea

level in the Galveston area. Galveston Bay has a well-documented history of hurricane-induced floods for the students to research. This study unit challenges students to predict the outcomes of this inundation and its impact upon human activities. Observations on the cyclical nature of these events (they have been going on for years and will continue to go on) instills the knowledge that humans must learn to respect and live with these events.

The first image shows the Galveston Bay area on the Gulf of Mexico. State boundaries have been superimposed with a yellow line depicting the present-day coastline. Other colors indicate the topography and bathymetry (height or depth in relation to sea level): dark green indicates sea level to 50 meters above, light blue indicates sea level to 100 meters below. As a reference point for scale and size, the length of Galveston Bay is about 40 kilometers (25 miles). During the accompanying exercise, students use their knowledge of the area, hard-copy map information, images from the screen, and, above all, their minds to predict the extent and impact of a 1-meter flood.

The second screen allows the operator to change the computer's display colors. Now, all elevations that are less than 1-meter above sea level will be shown as a dark blue. When the third screen image appears, the coast of the Gulf of Mexico appears to have been flooded. The present-day coastline will reappear to allow the viewer to compare the two sea levels.

Students now have the ability to survey coastal areas, determine their susceptibility to flooding, and analyze the need for further studies. Areas in further need of study can now be turned into year-long learning activities using the skills and tools taught in today's math, science, and history classes. From my unique point of view, a teacher who has seen how scientists do science, this is how science is done in the real world and how it should be done in our schools.

2. The second series of images is of Io, a moon of Jupiter. Io has been recently determined to be very volcanically active. In fact, one of the volcanoes on Io rises about 2,500 km above the surface--a distance equal to about half the breadth of the United States! In this image, at about 2 o'clock, is a blue "bulge" representing one of Io's many volcanoes. The different colors on the image indicate different ranges of light being reflected off Io's surface. Darker colors are low values of light; brighter colors are high values of light. A histogram of this image shows that of the 40,000 pixels (picture elements; individual digital data blocks which when put together create the entire image), over 45,000 are low values. A few pixels are in the range from 32 to 64. Most of the pixels of the main image range from 64 to 208 in value; these values are distributed in a "bell shaped curve." The histogram trails off at about 208 and indicates that there are no light values above 224.

Many classrooms are able to get this same view (without the histogram) from a textbook, 35 mm slide, or on video disc. Viewing, however, is not the optimal way of learning about and understanding something. Finding out how things go together, work, and look in different views makes learning interesting and effective.

CD-ROM technology, desktop computers, and digital imagery allow the students to go beyond the noninteractive world of textbooks, slide shows, and video discs. By placing a cursor on the screen, a student can zoom in on the volcano and redisplay it magnified four times. Computer commands change the way the information is displayed so all of the light values below 30 (the background) and the values above 60 (the main part of Io) are reduced to either black or yellow. The values between 30 and 60 are now divided into more colors which allow the image processor/scientist/student to see even more detail of the structure of the volcano. Imagine what young minds will be able to do with such powerful tools and interesting subjects!

I will leave you with the memory of the power of these images and the thought of what they can do for our children. What you have seen today addresses some specific, real, and serious problems in science and all education -- the transfer of information.

Mr. McFaul. Thank you, Jim. Mr. Chairman, I think you can appreciate the power and the excitement of this project, as viewed from the perspective of a teacher who is actually using it. What we're really doing with this project is taking a very inexpensive technology and allowing the Government's data and the Government's software to be disseminated to the classroom and, in the course of doing that, producing some extremely useful and valuable educational tools.

The JEdI project evolved over the last 1½ years as a cooperative effort between the science agencies or the Government as a whole, the educational institutions that were working with us, and the private sector. We couldn't really have done this project without the private support of companies, almost 40 companies, that provided close to $180,000 worth of inkind, goods, and services to allow us to hold the workshop, to provide CD-ROM disks to us, to allow the teachers to use these and produce the activity book that Jim referred to.

One of the companies that was a supporter of this project from the very beginning is a company called the TMM Corp., and we're pleased to have one of the principals in that company, who is also a national spokesman for JEdI, Mr. Randy Jackson, here today to give us a perspective of this project as seen from Mr. Jackson's viewpoint, and his involvement in this, which I think, is indicative of how the cooperative spirit of the private sector, Government and education can, when we get together, do something very meaningful. Randy?

Mr. Wise. Mr. Jackson, if I could interrupt just for a second. There's a vote on in the House on approval of the journal. What I would do is encourage members to go and cast that vote. I'm going to skip it and just continue the hearing.

I'd ask if you could come back, on your way back through. If we can get a quorum together, and I think we're about able to, we can quickly pass this report. So you all go. I'm going to continue taking the testimony. Mr. Jackson.

STATEMENT OF RANDY JACKSON, JEdI SPOKESMAN, WESTWOOD, CA

Mr. Jackson. Good morning, Mr. Chairman. I first want to thank the subcommittee for inviting me here to speak. I also want to thank Jerry McFaul, the USGS, Jim Sproull, and the JEdI team. I commend you for a great data set.

I want to speak a little bit today about an important issue facing our country, one that is especially important to me, being a parent: The education of our nation's youth.

This undertaking can be greatly enhanced by making information from NASA, USGS, and NOAA available on CD-ROM disks. There's been a desperate need for innovative ways to improve our educational system, especially in sciences.

The American Academy for the Advancement of Sciences, "U.S. education is failing to adequately educate enough students and hence, failing the Nation. America has no more great priority than the reform of education in science, mathematics, and technology."

JEdI, in the demonstration you just saw, is a cost-effective solution to part of this problem. Multimedia technology used by JEdI to present scientific information not only enhances the entire learning process, but may someday even change the way we teach our children.

Jim Sproull's demonstration of coastal flooding and Voyager images shows you how students can abandon canned experiments and work with real data, with the same data and tools real scientist use.

Students find themselves grappling with questions about how our world is changing, and what this impact has on us today. To help put this in perspective, I think it's safe to say that I certainly wasn't the first or the last student whose eyes would just glaze over at the mention of science.

Static, dry lectures and experiments lose students almost from the gate. Why? Because they're boring; it's not fun. The research process tends to be an exercise in futility. JEdI, in contrast, brings the subject to life by using real data. It grabs the students attention and interest by making them an integral part of the learning process.

Kids also have been traditionally crammed with information in the classroom. The emphasis of this teaching method, as most of this in this room remember, is retention. We absorb information, memorize it, and repeat it back, but if we look at the root of the word "education" it means to bring out and learn from within. In other words, education is supposed to expand the mind, not just fill it with facts and figures.

JEdI's interactive visuals eliminate rote learning by getting students actively and personally involved in the education process. Instead of memorizing and accepting information at face value, students soon find themselves asking questions and using the available data to find their own answers.

It's been documented that students retain 20 percent of what they hear, 40 percent of what they see, and 85 percent of what they see and hear together. By combining text, visuals, and data with CD-ROM technology, JEdI targets 55 percent retention and two to five times the learning curve. I hope you'll agree with me that this is quite exciting.

The best part is that this information is readily available through Federal agencies. Technology needed to bring JEdI to life already exist. I had a chance to experience something that was quite exciting to me in, I think it's McLean High School, which is in Fairfax County.

We gave a hands-on demonstration of CD-ROM in the classrooms, and I was very excited. It was an overwhelming response by the students. More importantly, they were enjoying the technology tremendously. They were actually having fun while they were learning.

So now the next step is to get JEdI into the classrooms. TMM is a company involved in the inception of the JEdI program and, working with the JEdI team, has developed a plan to promote awareness and support for JEdI with teachers across the country.

On a grassroots level, TMM and I have committed support for teachers, students, parents, school boards, and a nationwide hands-on tour soliciting funding and support from the private sector. Also, many of my friends from the entertainment industry have committed to the same project.

TMM capabilities are also distribution and the TMM process, which is electronic publishing with full motion video. Now, imagine how fun that could be in the classroom, actually having full motion video as part of the learning process.

Before I close, I'd like to say that I've always seen education as the backbone of our survival not only as a country but on a global level as well. The solution to many of our environmental problems, which are probably the greatest threat we face today, will be found in science, but if students aren't learning the subject, the next generation won't be equipped to do anything about it.

Ozone depletion, the greenhouse effect, landfills, and all the other crises will just continue until they overwhelm us. Thomas Edison once said that he believed that film would revolutionize education in the classroom. Were he alive today, I'm confident that he would say the same thing about JEdI and CD-ROM technology. I hope you'll agree with me. Thank you, very much.

[The prepared statement of Mr. Jackson follows:]

TESTIMONY OF RANDY JACKSON

to

THE GOVERNMENT INFORMATION, JUSTICE AND AGRICULTURE

SUBCOMMITTEE

of the

HOUSE COMMITTEE ON GOVERNMENT OPERATIONS

ONE-HUNDRED-SECOND CONGRESS

Wednesday, June 19, 1991

TESTIMONY OF RANDY JACKSON TO
THE GOVERNMENT INFORMATION, JUSTICE AND AGRICULTURE SUBCOMMITTEE
OF THE HOUSE COMMITTEE ON GOVERNMENT OPERATIONS
ONE-HUNDRED-SECOND CONGRESS
WEDNESDAY, JUNE 19, 1991

GOOD MORNING. I'D FIRST LIKE TO THANK THE SUBCOMMITTEE MEMBERS FOR INVITING ME HERE TODAY TO TALK ABOUT AN IMPORTANT ISSUE FACING OUR COUNTRY. AND ONE THAT I FEEL VERY CLOSE TO PERSONALLY. NAMELY, THE EDUCATION OF OUR NATION'S YOUTH. THIS CRUCIAL UNDERTAKING CAN BE GREATLY ENHANCED BY MAKING INFORMATION FROM FEDERAL AGENCIES -- SUCH AS THE NATIONAL AERONAUTICS AND SPACE ADMINISTRATION, THE U.S. GEOLOGICAL SURVEY AND THE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION -- AVAILABLE TO STUDENTS ON CD-ROM DISCS THROUGH THE JOINT EDUCATION INITIATIVE, OR JEDI FOR SHORT.

THE DESPERATE NEED FOR INNOVATIVE WAYS TO IMPROVE OUR EDUCATIONAL SYSTEM, ESPECIALLY IN THE SCIENCES, IS WELL KNOWN. AS SOME OF YOU MAY KNOW, THE AMERICAN ACADEMY FOR THE ADVANCEMENT OF SCIENCE'S PROJECT 2061 HAS GONE ON RECORD AS SAYING -- AND I QUOTE -- THAT U.S. EDUCATION IS FAILING TO ADEQUATELY EDUCATE ENOUGH STUDENTS -- AND HENCE FAILING THE NATION....AMERICA HAS NO MORE URGENT PRIORITY THAN THE REFORM OF EDUCATION IN SCIENCE, MATHEMATICS AND TECHNOLOGY.

JEDI PROVIDES AN EFFECTIVE AND COST-EFFICIENT SOLUTION TO AT LEAST PART OF THIS PROBLEM. THE MULTIMEDIA TECHNOLOGY USED BY JEDI TO PRESENT SCIENTIFIC INFORMATION NOT ONLY ENHANCES THE ENTIRE

LEARNING PROCESS BUT MAY, SOME DAY, EVEN CHANGE THE WAY WE TEACH OUR CHILDREN.

BRIEFLY, JEDI IS A FAR-REACHING COLLABORATIVE PROJECT THAT PUTS VAST AMOUNTS OF SCIENTIFIC DATA -- ALONG WITH THE COMPUTER TECHNOLOGY SCIENTISTS USE TO EXPLORE THIS DATA -- INTO THE HANDS OF HIGH-SCHOOL STUDENTS.

BY USING REAL-LIFE INFORMATION FROM NASA, THE USGS AND NOAA, FOR EXAMPLE, IN A CLASSROOM SETTING, STUDENTS CAN ABANDON CANNED EXPERIMENTS AND WORK WITH REAL DATA SUCH AS SATELLITE IMAGERY OF THE EARTH AND VIEWS OF DISTANT PLANETS CAPTURED BY SPACE PROBES. THEY'RE USING THE SAME TOOLS THAT REAL SCIENTISTS USE, AND THEY'RE GRAPPLING WITH QUESTIONS ABOUT HOW OUR WORLD IS CHANGING AND WHAT IMPACT THESE CHANGES WILL HAVE ON ALL OF US.

FOR EXAMPLE, INSTEAD OF STUDYING ABOUT, SAY, A METEOROLOGICAL AND OCEANOGRAPHIC EVENT CALLED COASTAL FLOODING, STUDENTS USING JEDI AND INFORMATION FROM THE USGS, NOAA AND NASA CAN ANALYZE COASTAL FLOODING'S IMPACT UPON A PARTICULAR AREA, PREDICT ITS DISTURBANCE OF HUMAN ACTIVITIES AND SPECULATE ITS COSTS AND RISKS. ALL IN REAL-TIME AND USING REAL-LIFE DATA.

TO HELP PUT THIS ALL IN PERSPECTIVE, I BELIEVE IT'S SAFE FOR ME TO SAY THAT I WASN'T THE FIRST -- AND CERTAINLY WON'T BE THE LAST -- STUDENT WHOSE EYES WOULD GLAZE OVER JUST AT THE MENTION OF SCIENCE. STATIC, DRY LECTURES AND EXPERIMENTS -- WHICH TEND TO BE THE NORM IN OUR SCHOOLS -- LOSE STUDENTS ALMOST FROM THE GATE. WHY? FOR THE SIMPLE REASON THAT THEY DON'T MAKE LEARNING FUN. IN OTHER WORDS, THEY'RE BORING.

JEDI, IN CONTRAST, BRINGS THE SUBJECT TO LIFE BY USING REAL SCIENTIFIC DATA. IT IMMEDIATELY GRABS STUDENTS' ATTENTION AND INTEREST, AND MAKES THEM AN INTEGRAL PART NOT ONLY OF WHAT THEY ARE LEARNING BUT OF THE LEARNING PROCESS ITSELF. BY MAKING LEARNING FUN, JEDI OPENS A WHOLE NEW WORLD THAT IS EXCITING AND INTERESTING.

KIDS ALSO HAVE TRADITIONALLY BEEN CRAMMED WITH INFORMATION IN THE CLASSROOM. THE EMPHASIS OF THIS TEACHING METHOD, AS MOST OF US IN THIS ROOM REMEMBER, IS RETENTION. WE ABSORB INFORMATION, MEMORIZE IT AND REPEAT IT BACK. BUT IF WE LOOK AT THE ROOT OF THE WORD EDUCATION, IT MEANS TO BRING OUT AND LEARN FROM WITHIN. IN OTHER WORDS, EDUCATION IS SUPPOSED TO EXPAND THE MIND -- NOT JUST FILL IT WITH FACTS AND FIGURES.

JEDI'S INTERACTIVE VISUALS ELIMINATE ROTE LEARNING BY GETTING STUDENTS ACTIVELY AND PERSONALLY INVOLVED IN THE EDUCATION PROCESS. INSTEAD OF MEMORIZING AND ACCEPTING INFORMATION AT FACE VALUE, STUDENTS SOON FIND THEMSELVES ASKING QUESTIONS AND USING THE AVAILABLE DATA TO FIND THEIR OWN ANSWERS.

TAKING A MOMENT FOR ANOTHER EXAMPLE, ONE OF THE JEDI CD-ROM DISCS CONTAINS A LANDSAT THEMATIC MAPPER IMAGE OF YELLOWSTONE PARK DURING THE PEAK OF THE 1988 FIRES. BY USING JEDI TO MANIPULATE ENVIRONMENTAL FACTORS SUCH AS WIND AND RAIN, STUDENTS CAN CONDUCT "WHAT IF" SCENARIOS AND IMMEDIATELY SEE WHAT EFFECTS THESE METEOROLOGICAL CHANGES WOULD HAVE HAD ON THE FIRE'S PROGRESS.

IT'S ALSO BEEN DOCUMENTED THAT STUDENTS RETAIN APPROXIMATELY TWENTY PERCENT OF WHAT THEY HEAR. FORTY PERCENT OF WHAT THEY SEE. AND 80 PERCENT OF WHAT THEY SEE AND HEAR TOGETHER. USING MULTIMEDIA AND CD-ROM TECHNOLOGY, JEDI BRINGS THE AUDIO, VISUAL AND INTERACTIVE COMPONENTS OF EDUCATION TOGETHER IN ONE PLACE, AT THE SAME TIME.

WITH THIS UNBEATABLE COMBINATION, STUDENTS CAN LEARN ALMOST SIX TIMES MORE IN THE SAME AMOUNT OF TIME. I HOPE YOU'LL AGREE WITH ME THAT THIS IS TREMENDOUSLY EXCITING.

AND THE BEST PART IS NOT ONLY DO WE HAVE ALL THE INFORMATION READILY AVAILABLE THROUGH FEDERAL AGENCIES, BUT WE ALSO HAVE ALL THE TECHNOLOGY NEEDED TO BRING JEDI TO LIFE TODAY.

NOW THAT YOU KNOW A LITTLE ABOUT JEDI, I'D LIKE TO TAKE A FEW MINUTES TO SHOW YOU FIRST HAND WHAT IT CAN DO. JERRY MC FAUL, THE ORIGINATOR OF JEDI, AND I, WITH YOUR HELP, WILL DEMONSTRATE THE JEDI DISC FOR _____________. JERRY........ [JACKSON ASSISTS MC FAUL IN DEMO AND OFFERS HANDS-ON PARTICIPATION BY SUBCOMMITTEE MEMBERS]

AS I MENTIONED, JERRY IS THE ORIGINATOR OF JEDI AND WILL BE TELLING YOU MORE ABOUT THE PROGRAM AND ITS HISTORY LATER ON.

TO MOVE ON, WE HAD THE PRIVILEGE LATE LAST YEAR OF CONDUCTING THE HANDS-ON DEMONSTRATION YOU JUST EXPERIENCED AT A CHEMISTRY CLASS AND INTRODUCTORY COMPUTER SCIENCE CLASS AT MC CLEAN HIGH SCHOOL IN FAIRFAX COUNTY. AND I CAN'T BEGIN TO DESCRIBE HOW OVERWHELMINGLY REWARDING IT WAS TO SEE JEDI USED IN A CLASSROOM SETTING. MORE IMPORTANT THOUGH, WAS THAT THE STUDENTS NOT ONLY LOVED IT -- THEY DIDN'T WANT TO STOP USING JEDI. THEY WERE ACTUALLY HAVING FUN WHILE THEY WERE LEARNING!

IF I WERE ASKED WHAT MY BEST LEARNING EXPERIENCES HAVE BEEN, I WOULD HAVE TO SAY TRAVELING AROUND THE WORLD. THE BEAUTY OF JEDI'S USE OF CD-ROM IS THAT IT GIVES STUDENTS WHO MAY NEVER LEAVE THEIR HOMETOWNS THE ABILITY TO SEE, HEAR AND LEARN ABOUT THEIR WORLD INTERACTIVELY. AND AGAIN, JUST BY USING INFORMATION THAT ALREADY EXISTS IN THE PUBLIC DOMAIN.

SINCE WE HAVE THE INFORMATION AND TECHNOLOGY AVAILABLE, OUR NEXT STEP IS TO GET JEDI INTO THE SCHOOLS. AS NATIONAL SPOKESPERSON FOR JEDI, I'M GLAD TO TELL YOU THAT TMM, INC., THE COMPANY WHOSE TECHNOLOGY MAKES THE JEDI DISCS POSSIBLE, THE JEDI TEAM AND I HAVE DEVELOPED A PLAN TO GENERATE AWARENESS AND SUPPORT FOR THE PROJECT WITH TEACHERS ACROSS THE COUNTRY.

ON A GRASSROOTS LEVEL, BOTH TMM AND I HAVE COMMITTED OUR OWN TIME AND FUNDS TO GENERATING WIDESPREAD AWARENESS AND EXCITEMENT FOR JEDI WITH STUDENTS, THEIR PARENTS, AND LOCAL EDUCATORS AND SCHOOL BOARDS BY SPONSORING AND PARTICIPATING IN A NATIONWIDE, HANDS-ON DEMONSTRATION TOUR. WE ALSO WILL BE USING OUR BUSINESS RELATIONSHIPS TO SOLICIT SUPPORT AND FUNDING FOR JEDI FROM THE PRIVATE SECTOR.

BEFORE I CLOSE, I'D LIKE TO SAY THAT I'VE ALWAYS SEEN EDUCATION AS THE BACKBONE OF OUR SURVIVAL. NOT ONLY AS A COUNTRY, BUT ON A GLOBAL LEVEL AS WELL. THE SOLUTION TO MANY OF OUR ENVIRONMENTAL PROBLEMS, WHICH ARE PROBABLY THE GREATEST THREAT WE FACE TODAY, WILL BE FOUND IN SCIENCE. BUT IF STUDENTS AREN'T LEARNING THE SUBJECT, THE NEXT GENERATION WON'T BE EQUIPPED TO DO ANYTHING ABOUT IT. OZONE DEPLETION, THE GREENHOUSE EFFECT, LANDFILLS AND ALL THE OTHER CRISES WILL JUST CONTINUE UNTIL THEY OVERWHELM US.

THOMAS EDISON ONCE SAID THAT HE BELIEVED THAT FILM WOULD REVOLUTIONIZE EDUCATION. WERE HE ALIVE TODAY, I'M CONFIDENT THAT HE WOULD SAY THE SAME THING ABOUT JEDI AND CD-ROM TECHNOLOGY. I HOPE YOU'LL AGREE.

THANK YOU FOR YOUR TIME THIS MORNING.

Mr. **Wise**. Thank you very much, Mr. Jackson and the entire panel. I was struck by something you said, which is that you can adapt this to the local angle and students to a particular problem, and you mentioned specifically global climate change and ozone depletion.

I'm curious, based upon the example that we saw earlier, if you can, program in, say, a 3 degree Fahrenheit increase in temperature on the eastern coast. Perhaps it's been more than that this May. Over a period of time, can you estimate how much of an increase you would have in water level or in sea level?

Mr. **Sproull**. At this time, on our disk, we don't have that capability. There are some models out there that we don't have available to us yet that would do such a thing, but we have to caution people that those models are pretty primitive yet, and making those assumptions from that would be stretching it probably quite a bit.

We have the ability to take the information from those models and say if a 3 Fahrenheit rise would give us a 50 meter rise. We can do that, but we can't model a 3 degree temperature rise at this time.

Mr. **Wise**. I just want to know how long I have to wait until West Virginia becomes beach front property. [Laughter.]

What strikes me about this—and please correct me if I've gotten the wrong impression—what does strike me, though, is that you have the ability, with the CD-ROM disk, to work the data in a lot of different ways.

If I'm going through a book, a hard copy book, you may have exercises for me, but those are set exercises. Here I design the exercise to any situation.

Mr. **Sproull**. Correct. The textbook is very linear. With what we have, that you could focus, for instance, on the Galveston Bay area, and have one group of students working on the impact of the wetlands from a 1 meter rise. You can have another group of students working on the impact on populations from a 1 meter rise.

With that, you begin to branch out. Once you study one area, the students can select other areas to do the same type of study. I feel confident that if I had free rein in my classroom, I could probably structure an entire year around that one image and branch off from that.

Mr. **Wise**. It sounds like a school can make unlimited use of a CD-ROM disk. Is this actually better than being online?

Mr. **Sproull**. In many ways it is. Online, you're limited to access to phones, which is another problem in teaching. Online sometimes can be very expensive. CD-ROM will not replace the ability to get quick data that we can get off of online, but it will certainly give us the ability to get a hold of archive data in a much cheaper way than online access.

Mr. **Wise**. That brings up other questions, though, of capability of schools. Is it enough to provide schools with the raw data on CD-ROM? It seems to me you have to provide an organized curriculum to go with that, don't you?

Mr. **Sproull**. We found we have to demonstrate that this can be worked in. When I started this project, I was a little bit apprehensive about whether we could do this? Could we take raw scientific data and plug it into a classroom?

After our teachers started working on this, I had no doubts. We have to demonstrate how it is to be used, and we have to get away from the idea that the curriculum has to be set all the time. We can use a lot of the tools for studies, meaning science, math, social studies, and English as we do JEdI. Kids will learn those as they go, if you will, online. Setting a curriculum around JEdI is not our intent, because there is no way we could do that.

Mr. WISE. The teachers that you've been working with—I take it there must be some teacher training process.

Mr. SPROULL. I'm in the process of doing it—Friday, I leave for a series of hands-on workshops that will take all summer, 1 week hands-on workshops, getting people comfortable and competent in using this. That takes 2 hours. By the end of 2 hours, people are processing images they had no idea up to that point, probably, existed. After that, it's the implementation of how are you going to use it in your classroom.

Mr. WISE. What process did you use to select the schools that this is going in?

Mr. SPROULL. We sent out a number of notifications. We had a JEdI-gram that we distributed as widely as possible, and anybody that showed the least bit interest got on our mailing list.

From all of the responses and all of the contacts, I've done probably 200 demonstrations all over this country, and from all of those responses, we had people say, "I want to be involved," and they signed a memorandum of understanding with the geological survey saying that they would test the data bases, that they have the equipment available, and they would provide us feedback if we were to provide them with a set of JEdI disks and the activity book.

Mr. WISE. Now, in terms of having the equipment available, does that mean they also have to have the auxiliary equipment for the CD-ROM disk? I think that costs roughly, what, $500 or so?

Mr. SPROULL. Yes.

Mr. WISE. So the school already has that. That's not something that comes with the notes and the information?

Mr. SPROULL. No, sir. We're finding there are more and more CD-ROM readers out there. It's surprising that there are that many out there. They're used primarily in libraries right now, but they are going to make inroads into the classroom.

Mr. WISE. Mr. Jackson, you've spoken about the enthusiastic reaction among students, and I can see that in adults, too. What about among teachers?

Mr. JACKSON. Oh, well, there's been a wonderful response. As a rule, when I travel, touring, I always visit schools, and I have many friends who are teachers across the country, and I have sent them various information concerning JEdI. They're very interested.

Mr. WISE. Why did your company get into this initially?

Mr. JACKSON. It was at a conference here in the District of Columbia that I met Jerry McFaul, and he began to tell me about JEdI, and the more he told me, I became addicted. I wanted to be a part of it. I think it's important to our country, to our future education. It's the backbone of survival. It's important to me. I'm a parent, so I'm concerned about my children's education as well.

Mr. WISE. What needs to be done, in your opinion, to make the program self-sustaining.

Mr. JACKSON. I think the important thing is getting it into the classrooms. I mean, the technology is there. It does exist, but by getting the kids involved, that's a totally different level, and that's where I come in, and my friends in the entertainment industry.

I'm going to launch a campaign across the country, various friends who are touring, say "New Kids on the Block," maybe they can drop in at various cities and visit a school and talk about JEdI, things like that. I think that will get kids more involved if they see the people they idolize involved with JEdI.

Mr. MCFAUL. Mr. Chairman, I think we also have an opportunity here to expand on this experiment that we're calling JEdI. By the way, I should mention that the term "JEdI" was allowed to be used by one of our industry supporters, the Lucas Film Corp., but what you're looking at is the results of taking three agencies worth of data and software developed by these agencies to view and visualize these data, we've taken that and rolled it along with a major teacher involvement into something that's meaningful for the teachers.

Now, if we've only used three agencies' data, and there are, in my estimation, over 50 agencies doing things in CD-ROM, just think what we could do if we got all of those other agencies' data involved in our project.

And we have the advantage of, No. 1, the economics of the technology working for us. We can produce very affordable, inexpensive teaching tools, and as Jim Sproull mentioned, $30 is all one has to pay to procure the three disks and the activities book right now.

Second, the readers, or the technology to actually access the information, right now, they are between $400 and $500, but they, by all industry estimates, should be in the several hundred dollar range very soon. The technology is designed to be a mass produced technology, CD technology, and that's what CD-ROM builds on.

So we have some very positive trends working in our favor to keep the costs of this information access very low. We have the potential source, a very rich source of information coming from the rest of the Federal Government, if we can coordinate efforts a bit to get their information supplied to us, and, as Jim said, transition the boundaries between specific disciplines in the classroom and allow social studies and chemistry and math all to be integrated, because these various other disks provide information that would all blend together and provide a very, very rich educational experience.

So I think we have an experiment that proved that reuse of the Government's information, that's coming out on CD-ROM anyway, is very vital and useful to the educational community, and I think we have nowhere to go but up on this project.

Mr. WISE. What kind of Federal support do you need to sustain this, or what type of additional Federal support do you need?

Mr. MCFAUL. Well, we haven't really gotten down to brass tacks in terms of dollar figures. We are encouraged by the University of Maryland's proposal to the National Science Foundation to secure enough funding to provide a national coordination effort for JEdI for the next 3 years, and we hope the folks at the National Science Foundation agree with us in our endeavors here.

Certainly, having additional support from Congress would be welcomed, and if that allowed other agencies, as they're making their CD-ROM disks, to, let's say, make additional disks that would be provided to the project, perhaps in some sort of disk bank, that could then be drawn upon by schools and educational institutions who would like to have additional disks.

Writing to the disk bank might secure those disks, if the incremental funding, which would be relatively low, because CD-ROMs are in the price of $1.50 to $2 apiece, the incremental funding to produce a disk bank of this type, I think, would be very minimal, and we could leverage a large amount of educational resources off of a very modest funding.

Mr. SPROULL. Mr. Chairman, I will be working with the University of Maryland on this project as it moves over there, and we've already talked about possibilities. For instance, there's a particular disk we're talking about that has all of the United States plus a lot of international climate data; it cost $2.

If we bought a number of those and kept them at Maryland and distributed them at cost plus shipping and handling plus another little bit of an increment of a dollar or so a disk that will allow us to bank in more money to buy more disks, then we could distribute those disks at less than $8 per disk to the teachers.

I know, as a classroom teacher, I would pay for that out of my own pocket, as I usually have done in the past, because it's something that I need, and it's very, very cheap. Now, if those disks were made to us free of charge, we could even do more with it. We could distribute it on a much wider basis, much more cheaply, and have more development go into putting this together.

Most of what we have on the JEdI disk is integrated. We've taken a lot of things and put them together on an integrated, menu-driven front end. What we want to do now is move to take a disk right after coming out of NOAA, NASA, the Geological Survey, or another Government agency, and distribute that bundled with a teacher activity to demonstrate its use and how to access that particular data set.

Mr. WISE. On a little different turn, in the technology, Mr. McFaul or anyone, what's the life span of these disks? Is there any problem with storage?

Mr. McFAUL. Well, we have experienced with disks we've made over 5 years ago that still seem to be perfectly readable. The industry mastering and replicating facilities generally give a figure of about 25 years or more as the life of the disk.

We, via the SIGCAT organization I mentioned earlier, have an effort underway working with the Naval Air Development Center in Warminster, PA, to do additional research to find out the longevity of these disks through environmental torture testing and life cycling of the disks themselves.

Mr. WISE. The environmental torture testing, does that approximate the use in a regular school? [Laughter.]

Mr. McFAUL. Sixth through eighth grade. So we're looking into that situation, but we're very confident that the technology is a very hardy technology, very robust technology, in terms of its ability to preserve information.

In fact, a lot of agencies, our own included, are looking seriously at CD-ROM for it archival qualities in addition to its dissemination qualities.

Mr. **Wise**. Mrs. Mink, any questions?

Mrs. **Mink**. Yes. I'm sorry I came in late. I probably missed the best part of all of your testimony. I was interested in knowing, if the schools did receive the disks, what sort of technology or equipment would they have to have in order to have access to the information on the disks?

Mr. **Sproull**. It runs on both the IBM-DOS platform or the Apple Macintosh platform. The DOS side runs at what I consider now kind of at least easy to get to technology. The cost of a basic machine to run all of this would be a little less than $2,000, an old 286 that works at 12 megahertz. It's a pretty simple machine compared to what else is out there.

Mrs. **Mink**. And what would be the average cost of that machine?

Mr. **Sproull**. Average cost is less than $2,000 for the entire computer and the monitor to display it.

Mrs. **Mink**. How many sets of these disks are already in a form that can be distributed to schools?

Mr. **Sproull**. We have over 400 disk sets sent out within the last month, and the feedback I'm getting once they get them properly installed is they're just absolutely enthralled with what they're able to access.

Our first pressing was 1,500 disks. People who are buying the disk at $30 have said, that I'm giving those away to teachers. These are only a few, less than 200, maybe now less than 100 sets left, and they're going to have to repress. The demand has been overwhelming since we published in May.

Mrs. **Mink**. When the teachers actually receive the disks, what sort of backup workbooks or other kind of teaching booklets accompany the disks so that they would have some feeling of comfort in dealing with it?

Mr. **Sproull**. They all come bundled with our teacher activity book.

Mrs. **Mink**. So every one of the disks would have——

Mr. **Sproull**. Every one comes with that, which is a published open file report from the U. S. Geological Survey, and it demonstrates the use of 11 activities, 1 of which was coastal flooding, of how to use this.

We make a statement in the very front that there is no way we can write an activity for every use here. It goes on. It's not only broad, it's also very, very deep.

Mrs. **Mink**. The development of the disks and the activity books, is that funded by the Department of the Interior, or how did you come about all of this?

Mr. **Sproull**. Our teacher workshop was held last year. Last year, by the end of July, we brought in 20 teachers from across the United States, had published two CD-ROMs, two out of the three, and had the makings of that teacher activity book for a little bit over $4,000.

Mrs. **Mink**. It was sponsored by U.S.——

Mr. **Sproull**. It was sponsored by the USGS. We brought teachers in with a promise that they would get graduate credit—that was our biggest expense of money as of July of last year—with also the tentative promise they would get some computer systems.

By the end of workshop, a company called Sun Moon Star donated a system for every one of our 20 participants. So that started the ball rolling. This summer, in every workshop, every 1-week workshop we have, each participant is required to give me a very detailed outline of a teacher activity for the JEdI disk. I will put those together in electronic form and disseminate them either through a bulletin board or a floppy disk, but we will keep building this file of activities.

That's one of the things we want from our beta test sites. These sites are to give us back activities, and eventually we'll have a very, very large compendium of activities applicable to our JEdI disks.

Mr. **McFaul**. This brings up a point, following Jim's points about the funding. Basically, we had no funding. We scraped and found enough money to do the things Jim described, but we depended on industry to really cooperate with us, which they did admirably and made the disks for us for nothing, and then NIMBUS Information System produced the disks the teachers use in the workshop.

As Jim mentioned, Sun Moon Star and Apple Computer donated entire computer systems, and other companies donated CD-ROM disks to use. So we had about $180,000 worth of donations in goods and services to the project just because the industry got behind this project and thought it was something worthwhile.

Mr. **Wise**. If I could interrupt just a second. I apologize. I'd like to start a rolling quorum, if I could. It will be about 30 seconds. This hearing is recessed for all of 30 seconds. Don't go anywhere.

[Recess taken.]

Mrs. **Mink**. I have only one final question.

Mr. **Wise**. Yes, we're returning to Mrs. Mink.

Mrs. **Mink**. In your testimony, Mr. McFaul, you said that materials were scheduled to be distributed free to over 500 schools around the country. Is Hawaii included?

Mr. **McFaul**. If it's not, it will be, ma'am. [Laughter.]

Mr. **Wise**. Will the gentlewoman yield?

Mrs. **Mink**. I want that noted.

Mr. **Wise**. Now that we're getting down to being parochial, what about West Virginia?

Mr. **Sproull**. There are at least two teachers in every State of the United States that have this, and these are the Presidential awardees in science and mathematics. So Hawaii is represented along with West Virginia, and every other State.

I also know that West Virginia is represented even more. There are a number of teachers out there who have gotten the disk outside of the Presidential awardees, and I believe there are one or two others, Mrs. Mink, in Hawaii who have those.

Mrs. **Mink**. Could we get the names and the schools so that we could go and see what they're doing with it, because I'm very much fascinated and in support of what you're doing, and if we could en-large the distribution or expand it through congressional support, I think that would be ideal.

Mr. **Sproull**. Yes, ma'am. I'll get you those names.

Mr. **Wise**. If I may ask you to continue, if West Virginia is well represented as being active, can I ask Mr. Jackson, then, if he might be willing to stop by at some point or bring some of his friends. I think we could put together a heck of a program, particularly because West Virginia is very proud of the fact that it has a national teacher of the year this year, it's Rae McKee from West Virginia.

Mr. **Jackson**. Absolutely.

Mr. **Wise**. Thank you. At this point, we're going to recess very quickly for the final member that's necessary to vote on these reports. This hearing is recessed for at least 15 seconds.

[Recess taken.]

Mr. **Wise**. I would ask any of the members if there are further questions of the panel.

I just want to thank you very much, because I think clearly what you're doing is extremely important. It's not only informative, but, as Mr. Jackson pointed out, it's educational and interesting.

I think it's one way that we can get a lot of information out to a lot of schools. I represent a rural area, and the importance of having this type of information readily available means a lot, and also there's certain aspects that are attractive. You don't have to be online all the time.

The subcommittee looks forward to continuing to work with you and to further get the information that's important out to those people that ought to go receiving it. We appreciate the time that you spent, not only with the subcommittee, but the time that you've spent developing this. Thank you very much.

Mr. **McFaul**. Thank you for the opportunity to tell you about it.

Mr. **Sproull**. Thank you.

Mr. **Jackson**. Thank you.

Mr. **Wise**. The subcommittee will stand in recess for a couple of minutes while you remove the equipment.

[Recess taken.]

Mr. **Wise**. Our hearing will resume. I would like to welcome David Burnham, the codirector of Transactional Records Access Clearinghouse, Washington, DC, and Professor Susan Long, codirector of the Transactional Records Access Clearinghouse, Syracuse University, Syracuse, NY.

Mr. Burnham, as you may have seen from the earlier panel, we have a practice in this subcommittee of swearing in all witnesses. If you would stand and raise your right hand.

[Witnesses sworn.]

Mr. **Wise**. Your written statements in their entirety are made a part of the record, and I would invite you to summarize in any way.

STATEMENT OF DAVID BURNHAM, CODIRECTOR, TRANSACTIONAL RECORDS ACCESS CLEARINGHOUSE, WASHINGTON, DC, ACCOMPANIED BY SUSAN LONG, CODIRECTOR, SYRACUSE UNIVERSITY, SYRACUSE, NY

Mr. **Burnham**. Thank you, Mr. Chairman and members of the committee. It's a pleasure to be here. What we thought we'd do is the following: I will give a brief summary describing the idea of TRAC and what we're trying to do, and then Sue would present to the subcommittee some slides that summarize how data can be used to look at the performance of government.

As you noted, we are speaking on behalf of the Transactional Records Access Clearinghouse, which we call TRAC. Our goal is to teach individuals and organizations how they can obtain and use a new kind of Federal information to assure themselves that their Government is functioning in a fair and effective manner.

TRAC is a part of Syracuse University. We locate and obtain administrative files of Federal Government agencies which have never before been available to the public, then, using our technical expertise, we seek to unravel what these data show us about the actual performance of the Government.

We're talking about audit rates in each of the IRS districts, indictment rates, NRC inspections activities. So far, we have focused our attention on the Federal regulatory enforcement agencies such as the Justice Department, IRS, Nuclear Regulatory Commission, and EPA.

We have now obtained tapes with hundreds and hundreds of millions of transactions of the Government going back to about 1974 right up to date. Using these information resources in the mainframe computer at Syracuse, we prepare regular reports as well as specialized analyses and computerized files.

If a person has the technical ability, you can obtain tapes and look at this data on your own. TRAC data has served as the basis for news coverage on topics as diverse as environmental regulatory enforcement and public corruption, as a foundation for local government deliberations on the regulation of the rental market, as an information tool by businesses concerned about disparities in IRS tax audit standards and collection practices, by scholars conducting research on Federal agency effectiveness and by Congress.

Last year, for example, TRAC data served as the basis for a series of questions from the staff of the Senate Judiciary Committee during the confirmation hearings of Robert Bonner, the current head of the Drug Enforcement Administration.

Before describing how TRAC functions and giving you some concrete examples of its work, I'd like just to summarize three elements that we think has changed the world in a dramatic way.

No. 1, the universal adoption of computers during the last decade by all of the Federal agencies means that detailed data about the daily operations of all Federal agents working in the field are now collected and stored in ways that make it very easy to retrieve, more easy to retrieve than ever before.

No. 2, the Federal courts have are generally ruled that the FOIA applies to all Government records, including computer tapes, diskettes, what have you.

No. 3, the rapidly increasing ability of computers to analyze massive collections of data—one of the studies you'll see is based on a 5 million case data base, and we're able to analyze it—gives individuals and organizations a powerful tool where they, even the single citizen, are able to say, "Hey, what is the IRS doing out there?"

Since the beginning of history, Government administrators, of course, have tried to keep track of the activities of their agents. What's entirely new is that today's activity reports now can be collected and analyzed at comparatively little cost because of the power of the computer technologies.

For a variety of technical and cultural reasons, however, society's efforts to obtain and study the information that describes these operations, these transactions, has not kept pace with our ability to do so.

One reason for this failure is the inertial power of our past experiences. For thousands of years, information has been recorded on documents, usually paper. Treaties, memos, press releases, contracts, letters, textbooks, diaries, constitutions, newspaper articles, this statement to Congress; these are the channels by which we receive information.

Documents are the main way we look at the world, other than our eyes. Whether taking a high school science course, reading the family bible, starting a business, buying a house, writing a will, all of us in this room grew up in a world where documents, paper documents, played a major role in our are perceptions of what we think of as the real world.

Suddenly, in the last 15 years or so, computers have become a part of government, business, education, and medicine, and transactional information is available. The old-fashioned literacy, the reading literacy, no longer is sufficient for understanding our world.

Comprehending the vast sweep and potential power of this new information, seeing that the long available documents of history now have a genuine rival, understanding that how we describe and perceive Government no longer must rely on anecdotes alone, is the first difficult step.

Once this entirely new approach has been grasped, once it has been understood by newspapers, by Congress, by scholars, then can come the development of the technical and analytic skills to select, obtain, and use this information.

Now, Sue is going to give you a presentation of some of the data developed by TRAC in the last few years. We have some slides that demonstrate this new approach very clearly.

Ms. LONG. Transactional information, as David's been saying, allows a new kind of constructive oversight, and we wanted to take some examples from some of TRAC's past studies.

One of the things that we've looked at is the evenhandedness of IRS enforcement patterns. Here's a slide showing variations in the odds of audit faced by taxpayers in different parts of the United States. We can see that the odds range from roughly 1.9 percent out in Nevada down to only half a percent in Massachusetts and New Jersey, thus varying by three or four times.

[Slides follow prepared statement, see slide 1.]

Ms. Long. Other areas in IRS also show vast variation in enforcement practices. If you are a taxpayer delinquent account; that is, if you owe money to the IRS, and IRS wants to collect it from you, IRS has a great deal of discretion, and one of the things they can do is to allow you time to pay your debt through an installment plan.

We can see that this discretion is exercised very differently in different parts of the country. In Indiana, for example, 22.7 percent of the taxpayers with delinquent accounts were allowed to pay over time, about one in four; but in New Hampshire, only 2.2 percent were given this option, only one-tenth as often as the similarly situated taxpayers in Indiana.

[See slide 2.]

Ms. Long. Obviously, an alternative to an installment agreement is IRS coming out and seizing your assets or your home or your business. So this difference has a very major impact on citizens. Once again the data shows major variations in how IRS enforces tax laws.

[See slide 3.]

Ms. Long. Turning to another subject. For some years, IRS has contended in its published reports that tax underreporting has grown very rapidly over the past several decades. This chart represents, from IRS's figures, the agency's best estimate of the extent of taxes unreported on individual Federal income tax returns, and we see a fairly sharp rise from their figures.

[See slide 4.]

Ms. Long. Unfortunately, however IRS did not correct for the impact of inflation over this period, and having access to the data allows you to make that adjustment. And you can see on the next slide, after we've adjusted the figures for inflation, that there's a rise, but it's not as rapid.

[See slide 5.]

Ms. Long. During this same period of time, of course, there's been a significant growth in the number of taxpayers. If we introduce that correction as well, again, we see a flattening out of the trend.

[See slide 6.]

Ms. Long. Finally, these estimates from IRS are based upon samples of returns that IRS has selected for a special and very thorough audit. As we know, any time we have an estimate based on a sample of information, there is a margin for error called "sampling variability." This next slide, in the gray triangles, indicates the margin of expected error.

[See slide 7.]

Ms. Long. As you can see, clearly, based on IRS' own data, once the adjustments have been made that should have been made, we see there has been essentially no change in the estimated level of underreporting on tax returns since 1969.

We've also done some studies of the Justice Department, and the kinds of transactional data we've obtained I'm sure might be helpful for the committee in its oversight of that agency.

The next set of slides present data from our first report, which looked at the enforcement practices of a small number of big city

U.S. attorneys' offices. Here is a map which shows the particular large city districts that are covered.

[See slide 8.]

Ms. **Long**. The next slide shows a blowup of the northern corridor, indicating the big city U.S. attorney's offices covered there.

[See slide 9.]

Ms. **Long**. One of things we examined was the rate of criminal prosecutions in each of these large, big city U. S. attorney offices. In this chart, we're looking at the average number of criminal defendants that were prosecuted relative to the population in each district, and you can see a vast variation, even among these big city districts.

[See slide 10.]

Ms. **Long**. So that in southern district of New York, which consists of Manhattan and a few nothern suburban areas, we see that the rate of criminal prosecutions is about three times that in northern Illinois, which covers Chicago, or in Massachusetts.

One can also look in detail over the types of criminal prosecutions that are being brought. The U. S. attorneys have a great deal of discretion in how they handle the cases that are referred to them, and, in fact, only actually prosecute about one-third of the referrals that they received.

[See slide 11.]

Ms. **Long**. In the United States during this period of time about 24 percent prosecutions were for drug crimes, but these varied in these big city districts from a high of 40 percent in the eastern district of New York, covering Brooklyn area in general [see slide 12], down to a low, out in central California covering the Los Angeles district, of only 17 percent.

[See slide 13.]

Ms. **Long**. There was a fair amount of interest across the country in how the discretion exercised by prosecutors, using articles from the Los Angeles Times, the New York Times, and Newsday.

One of the explanations for these different enforcement patterns appears to relate to the allocation of attorneys to each of these offices [see slide 14], and here is the slide showing selected districts. It presents data about the number of Federal prosecutors in each district per million people living in that district.

[See slide 15.]

Ms. **Long**. Mr. Chairman, you should be pleased to see that in West Virginia, the southern district, there were 20 attorneys per million population. However, at the bottom we have the northern district of New York, which includes Syracuse, where I'm located, and we had only six attorneys per million population. When you look at all 94 of the districts, the actual range, many districts is only as low as 5, and it goes over 30. So there's tremendous variation.

Mr. **Schiff**. Professor Long, if you know, does the Senate Appropriations Committee have anything to do with the number of attorneys, or is that just coincidence? [Laughter.]

Mr. **Wise**. No. The fact that half the legislature is in jail now might have something to do with it. [Laughter.]

Mr. **Schiff**. I didn't want to say that.

Ms. Long. We looked to try to understand better why there are different patterns, and we looked over the decade of the 1980's, and, on average, there has been very large growth in the number of prosecutors hired in U.S. attorneys' offices across the land.

So in the decade of the 1980's, even correcting for the growth in population, there is an average increase of 57 percent in the number of prosecutors, Federal prosecutors. But you if look district by district, this jagged line shows how variable this increase was across districts.

In some districts, as the chart shows, there is no increase, zero percent after correcting for population, while in other districts there was growth as high as 200 to 300 percent. Some identified peaks of these mountains are those districts which experienced rather large increases. You can see West Virginia, the northern district, had a very high increase, approximately 300 percent, Wyoming had over a 200 percent increase, and Hawaii, the increase was somewhere between 150 and 200 percent.

[See slide 16.]

Ms. Long. The next slide presents the same data but here we've labeled some of those districts that were on the bottom of the heap, in terms of their increase in the number of attorneys during the 1980's, and we see that many of the very large urban districts are represented here.

[See slide 17.]

Ms. Long. Central California, that's Los Angeles, had zero percent growth in prosecutors, after adjusting for population growth. Northern California, San Francisco, also very low; District of Columbia itself; northern Illinois, which is Chicago; and New Jersey were all down at the bottom.

[See slide 18.]

Ms. Long. We've also done studies on particular topics, and this is taken from a study that we did for the Bureau of National Affairs, a Washington based publisher looking at environmental enforcement activities of the Federal Government in California. In this transparency, we can see that California represents about a little over 10 percent of the population in the United States.

They have roughly 10 percent of the Federal prosecutors, but when we look at environmental prosecutions, both civil and criminal, they are underrepresented. In the criminal area, it's only about 7 percent of cases are out in California. In the civil area, it's only around 3 percent.

We can look at more detail on this next slide at Federal Government within California, and the top bar is for the United States, and it shows that during the period 1982 to 1990, there were approximately 20 environmental prosecutions, civil or criminal, per every 10 million population in the United States, while in California, there was only about seven, or a third the level.

[See slide 19.]

Ms. Long. In the various districts of California, the northern district there around San Francisco; the central district, Los Angeles; the eastern district, being the inland valley, the Sacramento area, and the southern district, including San Diego, we can see tremendous variation, and in particular northern California seems unusually low.

[See slide 20.]

Ms. Long. Another interesting phenomena is in southern California, the color breakdown within the bar represents criminal versus civil cases, and you can see that in southern California, while its enforcement level is lower than the United States as a whole, a very high proportion of those are in the criminal area, and, in fact, their rate of criminal prosecutions for environmental matters is many, many times that of the United States.

Mr. Burnham. That's just a summary of some of the data we have developed. We want to stress that this data doesn't provide answers. It allows people to ask questions that have never been asked before. No one has ever looked at prosecutorial discretion in this way.

When we did the study on big city prosecutors, Ron Ostrow, who is a very good reporter for the Los Angeles Times, went to the acting U.S. attorney, Gary Fees, and asked him why there were so few narcotic cases. Mr. Fees said, one reason it was low was because they had concentrated on bank fraud and defense contractors, a reasonable response. But have you ever heard a prosecutor explaining what his values are, what he's interested in?

When Mr. Bonner, who was the U.S. attorney in Los Angeles during most of that period, was appointed to be the head of the DEA, the Senate Judiciary Committee looked at our data, and they asked Mr. Bonner for his explanation of the data. He came up with a different answer. He said it was because he was going after big cases, and the big cases took more time to prosecute, so that there naturally were a smaller number of them.

Neither the Senate Judiciary Committee nor the Los Angeles Times came back to us and said, "Will you do an additional analysis? Determine if this district in Los Angeles actually did bring more bank fraud cases than the other big city districts?" They didn't come back and ask us to do that.

The Senate Judiciary Committee didn't come and say, "Well, Mr. Bonner says it's because he's brought big cases. Is that true? Does he have more big cases than the other districts?"

We believe TRAC's methodology is a very, very useful way of looking at our Government. We need these agencies, we want them to be effective, we want good tax collection, but it has to be done in a fair way if our citizens are going to cooperate with their government.

That is the end of our presentation. We'd love to have whatever questions.

[The prepared statements of Mr. Burnham and Ms. Long follow:]

Prepared Testimony

and

Statement for the Record

of

SUSAN B. LONG AND DAVID BURNHAM

Co-Directors

TRANSACTIONAL RECORDS ACCESS CLEARINGHOUSE

Syracuse University

on

THE VALUE OF GOVERNMENT TRANSACTIONAL DATA

before

Subcommittee on Government Information, Justice and Agriculture

Committee on Government Operations

U.S. House of Representatives

June 19, 1991

Mr. Chairman and members of the Committee, thank you for this opportunity to testify this morning on the value of federal government data. We are speaking on behalf of the Transactional Records Access Clearinghouse (*TRAC*) whose specific goal is to teach individuals and organizations how they can obtain and use a new kind of federal information to assure themselves that their government is functioning in a fair and effective manner.

TRAC, a clearinghouse at Syracuse University,[1] locates and obtains computerized administrative files of federal government agencies which have not been generally available before. Then, using its technical expertise, *TRAC* seeks to unravel what these undocumented data sources reveal about the focus, nature and changing character of federal regulatory and enforcement activities. So far *TRAC* has focused its attention on federal regulatory and enforcement agencies such as the Justice Department, the Internal Revenue Service, the Nuclear Regulatory Commission and the Environmental Protection Agency. A partial listing of *TRAC* information resources is attached to illustrate the types of government transactional records *TRAC* has obtained.

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[1] *TRAC* was founded in 1989 under the joint sponsorship of Syracuse University's School of Management and the S. I. Newhouse School of Public Communications. With offices in Syracuse, New York, and Washington, D.C., *TRAC*'s work is supported by grants and research funding provided by foundations and a variety of other sponsors, including the Rockefeller Family Fund, the Bauman Foundation, the Deer Creek Foundation, the J. Roderick MacArthur Foundation, the Matz Foundation (Edelman Division), the National Press Foundation, the New York Times Foundation, the Alida Rockefeller Charitable Trust, the Fund for Constitutional Government, and the Philip M. Stern Family Fund.

Using these information resources *TRAC* prepares regular reports, as well as specialized analyses and computerized files and tabulations, which are utilized by news organizations, businesses, scholars, federal, state and local government agencies, libraries, law firms, public interest groups and citizens. *TRAC* data have served as the basis for news coverage on topics as diverse as environmental regulatory enforcement and public corruption, as a foundation for local government deliberations on regulation of the rental market, as an information tool by business concerned about disparities in IRS tax audit standards and collection practices, by scholars conducting research on federal agency effectiveness, and by Congress. For example, *TRAC* data served as the basis for a series of questions from the staff of the Senate Judiciary Committee during the confirmation hearings of Robert Bonner, the current head of the Drug Enforcement Administration.

THE EMERGENCE OF A NEW KIND OF FEDERAL DATA

Before describing how *TRAC* functions and giving you some concrete examples of our work, we would like to briefly outline three elements of today's information environment that together have worked to provide citizens an unprecedented opportunity to comprehend the actual functioning of government.

Number One. The universal adoption of computers during the last two decades means that detailed data about the daily operations of all federal agencies are now collected and stored in ways that make it vastly easier to retrieve than in the thousands of years of previously recorded history when such information was marked down on paper or pieces of clay by the scribes of a Chinese emperor, an Egyptian king, or the clerks of our federal government.

Number Two. The federal courts have generally ruled that the Freedom of Information Act (5 USC 552) applies to all government records, regardless of whether the requested information has been recorded on paper, computer diskettes or reels of tape.

Number Three. The rapidly increasing ability of computers to analyze massive collections of data at relatively little cost has provided individuals and organizations a powerful tool for monitoring the actual operations of their government.

Since the beginning of history, government administrators have tried to keep track of the activities of their agents. What is entirely new is that today's activity reports now can be collected and analyzed at comparatively little cost because of the power of new computer technologies.

For a variety of technical and cultural reasons, however, society's efforts to obtain and study the information that describes the millions of day-to-day transactions of the government's agents have not kept pace with society's actual ability to undertake such analyses.

One reason for this failure is the inertial power of our past experiences. For thousands of years information has been recorded on documents, usually paper. Treaties, memos, press releases, contracts, letters, textbooks, diaries, constitutions, newspaper articles, statements to Congress, these have been the channels by which we receive a great deal of the information we use to organize and comprehend our world. Whether taking a high school science course, reading the family bible, starting a business, buying a house or writing a will, all of us in this room grew up in a world where documents have played a major role in shaping our perceptions of what we think of as the real world.

But suddenly, beginning in a serious way just over two decades ago, computers became an integral part of government, business, education, medicine and all other parts of our lives, and a new kind of information -- what we call transactional information -- became widely available. The old fashioned kind of literacy no longer is sufficient.

Comprehending the vast sweep and potential power of this new information, seeing that the long available documents of history now have a genuine rival, understanding that how we describe and perceive government no longer must rely on anecdotes alone, is the first difficult step. Once this entirely new approach has been grasped, then can come the development of the technical and analytic skills to select, obtain and process the data.

Given the cultural, conceptual and technical barriers that must be surmounted before the transactional records of the government can be utilized, it is hardly surprising that this information resource so far has been largely ignored, even by those with much to gain from the insights it allows. Examples of this failure can be found among many parts of society. For example, newspapers of the United States continue to rely almost exclusively on the official statements and press releases of government when it comes to covering the agencies of government. Academics, even those accustomed to dealing with computer data in other contexts, still largely rely upon personal interviews and the written word in government reports, memorandums, and other publications when analyzing government practices.

Although there have been distinguished exceptions -- such as Elliot Jaspin at the Providence Journal, Dwight Morris at the Los Angeles Times, Al Reiss and his students at Yale University -- very few reporters, scholars, or others have used transactional data to determine whether and how the agencies of government actually are carrying out their official missions. Most news organizations prefer to quote the claims of a U.S. attorney concerning the indictment of a leading organized crime figure rather than provide their readers a concrete analysis of that prosecutor's actual enforcement record.

TRAC's OBJECTIVES

The goal of *TRAC* is to reverse the cultural blinders that have served to prevent all of us from seeing this new kind of federal information and to teach members of Congress, reporters, scholars, businessmen and others how to obtain and analyze these data.

Why do we think this is important? Precisely how does society benefit by the dissemination and use of federal information in this way? As clearly recognized by the Constitution, constructive oversight of the federal government is an essential element of representative democracy. Although oversight may be defined in many ways, the process at least requires the exploration of two always related questions. First, are the agencies of government effectively managed, do they work? Second, are the agencies fair?

Because the separate tasks assigned to the agencies are so important -- collecting taxes, guaranteeing the nation's banking system, reducing the distribution of illegal drugs, regulating the use of nuclear power, protecting the environment -- assuring their effectiveness is essential to the continued functioning of the American society. Thus, monitoring how effectively government is managed and whether agencies are achieving their stated goals (yet without unintended costs or consequences) is vital. Equally important, however, is the second question: in the pursuit of their primary missions, are the agencies treating each citizen, businessman, and organizations in an even handed way?

Badly administered agencies enforcing the law in thoughtlessly erratic ways probably represent a more serious threat to both the civil liberties of the American people and their economic well-being than the deliberate conspiracies of rogue bureaucracies.

SOME ILLUSTRATIVE EXAMPLES

We now would like to present some case studies of transactional data we have obtained from several federal enforcement agencies. As we do every time we present our material, we begin with a very important caution: no single source of data ever provides final answers, rather such data help identify issues and questions which require resolution.

THE INTERNAL REVENUE SERVICE

The tax collection activities of the Internal Revenue Service impact directly on hundreds of millions of individuals, corporations and other institutions. As most House and Senate members know, a significant proportion of complaints received by congressional district and state offices involve problems with the IRS, or even allegations of mistreatment by the agency. From our conversations with case workers and from reports of the General Accounting Office, follow-up investigations show that a good number of the complaints against the IRS have some merit.

The Internal Revenue Service is divided into sixty-three districts, each of which is headed by an individual district director. Although the IRS has national policies on virtually every conceivable subject, this is a vast nation with wide regional variations so that it should not be expected that the agency would achieve totally uniform enforcement levels. *TRAC*'s analysis of IRS transactional data, however, shows there is an astonishing variation in how the law is enforced in different parts of the United States.

Tax Audits. One obvious IRS administrative activity which can be examined on a comparative basis is the number of returns audited in each district relative to the number filed. IRS records show that in a recent year there were districts, such as Wyoming and Nevada, where taxpayers were 3 to 4 times more likely to be audited than in other districts like New Jersey and Massachusetts. [AUDIT SLIDE] While regional variations in compliance levels and in the distribution of the level and type(s) of income might help account for some differences in audit rates, *TRAC* studies indicate that much of the variation appears to have little legitimate rationale.[2]

IRS Seizures and Installment Agreements. These questions about the management of the agency are reinforced by district to district comparisons of two

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[2] See, for example, Susan B. Long and David Burnham, "Solving the Nation's Budget Deficit with a Bigger, Tougher IRS: What Are the Realities?" Tax Notes, Vol. 48 No. 6 (August 6, 1990), pp. 741-757. Findings were similar in previous research studies conducted by Long.

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other agency activities. During the long complex process of collecting the nation's taxes, the IRS makes an administrative decision that a fairly small proportion of the individual cases it is processing require more than routine follow up. At that point, the individual or corporation involved is classified by the IRS as a "tax delinquent account" or "TDA." In a very small proportion of the TDA cases, the IRS physically seizes the assets of the taxpayer -- a business's plant, an individual's house or car, etc. -- to satisfy the tax bill. IRS transactional data show tremendous variation in seizure rates -- where the odds of having one's assets seized for delinquent taxpayers in Pittsburgh are 13 times that of the adjacent Philadelphia district (2.6% versus 0.2%), 15 times higher in San Jose than in the adjacent San Francisco district (3.1% versus 0.2%), or 10 to 20 times higher in Austin (4.1%) than in Manhattan (0.2%), Houston (0.3%) or even Dallas (0.4%). [SEIZURE SLIDE]

The IRS often chooses to take a less draconian path. In certain circumstances, for example, the individual person or business declared to be a TDA can arrange to meet his or her obligation to Uncle Sam by making a series of installment payments. Such "installment agreements" frequently can be advantageous to both the taxpayer, who doesn't have to go out of business, and to the government, that eventually collects the taxes that are owed. Once again, however, data obtained and processed by *TRAC* shows that the odds IRS will allow delinquent taxpayers to use installment payments varies sharply, from

22.7% of all taxpayer delinquent accounts in Indiana to only 2.2% in New Hampshire. [INSTALLMENT AGREEMENT SLIDE]

One interesting point about the audit rates, the seizure rates and installment agreement rates. When Long's analyses first identified these vast variations, IRS officials admitted that they were unaware such extreme variations existed within their agency since they had never examined their own data in this manner. A second point is that some months after the publication of these *TRAC* data, an independent panel appointed by Commissioner Goldberg issued a report questioning whether the IRS had become too decentralized. "Given its responsibilities, the IRS must conduct its operation on a decentralized basis," the panel said. "However, the operational decentralization of the IRS has been followed by a decentralization of authority to such an extreme that we question whether the National Office today has sufficient control over the actions of field offices to achieve fairness and uniformity on a nationwide basis."[3]

Misleading Statistics: Taxpayer Compliance. *TRAC*'s analyses of IRS data suggest the value of independent verification of agency findings. During the mid-1980s, for example, senior IRS officials such as former Commissioner Roscoe Egger and political figures like Michael Dukakis, the 1988 Democratic candidate for president, gave repeated speeches and statements claiming that tax cheating was a rapidly growing national problem. For the IRS, the claim of soaring noncompliance supported the argument for a larger and better equipped IRS. For Dukakis, the hope that tougher enforcement could produce a windfall of new revenue, sidestepped questions about how his government could pay for the social programs he advocated without increasing federal tax rates.

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[3] Internal Revenue Service, Report of the Commissioner's Review Panel on IRS Integrity Controls, October 26, 1990.

But these claims of soaring rates of individual income tax noncompliance are not supported by an analysis of the IRS's own research data. Since 1963 the IRS has regularly conducted thorough audits of random national samples of taxpayers to scientifically determine what IRS agents would find if every tax return were audited. IRS's published studies emphasized the growing total tax dollars these agency surveys indicated were not being reported by non-compliant taxpayers. Expressed in graphic form, the tax compliance picture presented by the IRS indeed looked very serious. [TCMP SLIDE 1] But *TRAC*'s analysis found that these IRS figures were quite misleading. First, agency statements had neglected to adjust for inflation. When this obvious adjustment is made, IRS estimates on tax under-reporting look like this. [TCMP SLIDE 2] Similarly there has been an increase in taxpayers over this period of time. When both inflation and the growth in the number of returns are considered, under-reporting on average look like this. [TCMP SLIDE 3] There is one other adjustment the IRS failed to make. As already noted, the IRS compliance research is based on sample surveys and like all surveys in which a small number of cases are used to estimate the behavior of the entire population, there is an expected margin of error (sampling error). When inflation, growth in the number of returns, and the margin of error are considered, compliance levels over the past several decades look like this. [TCMP SLIDE 4] So, contrary to the repeated claims of the agency's commissioner, which were echoed by political figures in Congress and elsewhere, the IRS's own best research suggests that since about 1969 individual income tax compliance of the American people appears to have been relatively stable -- in sharp contrast to the picture originally presented.

The question of how well the American people pay their taxes is an issue of great importance to the continued health of this nation. While accurately measuring tax compliance is a difficult science, misinformation clouds the ability of Congress and the public to make valid decisions about the effectiveness of the largest of all American enforcement agencies, the IRS. Further, what impact does such misinformation, widely trumpeted in the news media, have on honest taxpayers and their attitudes toward themselves and their government?[4]

JUSTICE DEPARTMENT

In addition to the IRS, *TRAC* has focused much of its attention on the Justice Department, who through its 94 U.S. Attorney Offices are responsible for prosecuting violations of federal law in the courts. A little known fact is that most referrals for federal prosecution by the FBI, the DEA, and other federal enforcement agencies -- approximately two thirds, in fact -- are declined by federal prosecutors. Which cases U.S. attorneys decide to prosecute and which they turn down are thus a very important area of discretion and shape actual federal enforcement and regulatory priorities.

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[4] For a detailed discussion of these and other IRS figures on taxpayer compliance, see Susan B. Long and David Burnham, "The Numbers Game: Changes in Tax Compliance During the Last 25 Years?" Tax Notes, Vol. 46, No. 10 (March 5, 1990), pp. 1177-1185.

TRAC has sought information on this seldom explored area of prosecutorial discretion by requesting computerized data about the criminal and civil enforcement activities of the federal government from a variety of official sources. These include the Justice Department itself, each of the 94 separate U.S. Attorney offices, the Federal Judicial Center, the U.S. Parole Commission, the Administrative Office of U.S. Courts, the United States Sentencing Commission, and regulatory bodies such as the Environmental Protection Agency. Additional data -- useful in understanding the sea in which each U.S. attorney swims -- has been drawn from the computerized files of the Census Bureau, the Office of Personnel Management, and the FBI which compiles national summaries of crime reported to local law enforcement offices.

So far, the transactional records have allowed *TRAC* to prepare four separate reports on various Justice Department activities. The first report [SLIDE OF FIRST REPORT COVER] examined the criminal and civil enforcement activities of eleven "big city" U.S. Attorneys from 1980 to 1987.[6] Most of the eleven [SLIDE OF US MAP] were selected on the basis of their similar features among the largest urban federal districts, as reflected in U.S. Census data.

Disparities in Criminal and Civil Enforcement. Our analysis found that when looked at in terms of population there is a very wide district to district variation in both criminal and civil enforcement. On the criminal side [CRIMINAL SLIDE], federal prosecutors in the Southern District of New York (Manhattan and northern suburbs of New York) brought approximately three times more indictments than their colleagues in Massachusetts, Connecticut, New Jersey, or Northern Illinois (the Chicago area). Although Manhattan obviously has special characteristics, it appears that the number of prosecutors assigned to each district by the Justice Department in Washington (big city per capita prosecutor slide) may be an important factor in determining total activity. Notice that Manhattan has five times more prosecutors on a per capital basis that Los Angeles. We will return to the question of the deployment of federal prosecutors in a moment.

The transactional data showed [CIVIL SLIDE] even more disparity in civil suits initiated by the government in each of the eleven districts. Again on a per capita basis, nine times more civil cases were initiated in the Northern District of

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[6] See David Burnham and Margaret Hanus DeFleur, The Prosecutors: Criminal and Civil Cases Brought in Federal Court by the Offices of Eleven United States Attorneys from 1980 to 1987, October 1989.

California (San Francisco) than in the Eastern District of Pennsylvania (Philadelphia).

Detailed examination of the computer tapes showed other curious anomalies. On the average for the period, 24 percent of the criminal cases brought by federal prosecutors involved drugs. (U.S. CHARGES SLIDE] But there was a considerable variation across districts. Forty percent of the individuals indicted by federal prosecutors in the [E.NY CRIMINAL CHARGE SLIDE] Eastern District of New York (covering Brooklyn and the rest of Long Island) involved drugs. We assume this was so high because of the influence of Kennedy International Airport. The district with the smallest proportion of drug cases -- 17 percent -- [LOS ANGELES CRIMINAL CHARGE SLIDE] was the Central District of California.

As many of our studies do, the various disparities prompted articles in the local press such as the Los Angeles Times [LOS ANGELES TIMES SLIDE], the New York Times [NEW YORK TIMES SLIDE] and Newsday [NEWSDAY SLIDE]. In one of these stories (published on November 6, 1989) Gary Fees, the acting U.S. Attorney in Los Angeles, said the Central District had a comparatively low rate of drug prosecutions mostly because the office was concentrating on fraud in the banking and defense industries.

Less than a year later, on July 11, 1990, the Senate Judiciary Committee held a hearing to consider the nomination of Robert Bonner to be the new head of the Drug Enforcement Administration. Bonner had been the U.S. Attorney in Los Angeles during a good part of the period covered by *TRAC*'s study. The committee asked Bonner to respond in writing to the questions raised by *TRAC*'s data. Bonner's primary response, that his office brought relatively few drug cases because it concentrated on only the largest and most complex matters, contradicted Fees's explanation. But neither the Senate Judiciary Committee or any reporter has sought the transactional data *TRAC* has which would allow them to try to determine the true story.

Variation in Staffing Levels. A second *TRAC* report examined how the Attorney General and his senior advisers have deployed the 7,000 federal prosecutors, legal clerks, secretaries, computer specialists and administrators in U.S. Attorney offices throughout the land during the decade of the eighties.[6] *TRAC* found that the number of attorneys assigned, per each million persons living in a district, varied sharply in 1989 -- from a low of 5 to a high of more than 30 [STAFFING FREQUENCY SLIDE]. Sometimes special circumstances help explain these differences, but often any rationale is difficult to discern. Many "big city" districts in comparative terms -- despite their demanding workload -- were understaffed. For example, six of the most urban areas of the United States -- the Central and Northern Districts of California (Los Angeles and San Francisco), the

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[6] See Susan B. Long, David Burnham, and Linda Kesselring, Federal Prosecutors: Composition and Growth in Staffing in Each U.S. Attorney Office During the Last Decade, December 1990.

Eastern District of Michigan (Detroit), Massachusetts (Boston), Maryland (Baltimore), and New Jersey (Newark) -- were only able to employ seven to nine prosecutors for every million people -- significantly below the national average. Yet the Justice Department's budget authorized Wyoming (Cheyenne), on a per capita basis, to employ 20 prosecutors for every million people, 2 to 3 times the level of these "big city" districts and almost four times the level in the Western District of North Carolina (Asheville) which had only five prosecutors per million population. Or take Vermont which had three times more assistant U.S. attorneys on a per capita basis than its neighboring state of New Hampshire.

During the decade of the eighties, the Reagan and Bush administrations deployed substantial numbers of new assistant U.S. attorneys -- a 57% increase on a per capita basis [GROWTH SLIDE]. Increases, however, varied sharply by district from 0 to 300 percent [DISTRICT GROWTH VARIATION SLIDE 1]. The pattern of growth was perplexing. Startling growth -- 200 to 300 percent --- occurred in the less congested, even rural, districts [DISTRICT GROWTH VARIATION SLIDE 2], such as the Northern District of West Virginia (Wheeling), Wyoming (Cheyenne), Western Michigan (Grand Rapids), and Northern New York (Syracuse). Yet, during the same period, the Justice Department's budget for highly urbanized districts such as the Central District of California (Los Angeles) authorized the hiring of only enough additional prosecutors to keep pace with that district's population growth -- representing zero growth in real terms for prosecutorial resources in one of the nation's largest metropolitan areas

[DISTRICT GROWTH VARIATION SLIDE 3] which thus remained remarkably understaffed in comparative terms throughout the decade of the eighties.

This pattern -- startling growth in the less congested, even rural, districts and no growth or slow growth in many of the most urban districts -- typified many areas of the country. Such sharp staffing differentials have real implications for which federal violators are hauled into court. Since referrals generally greatly exceed available prosecutorial resources, federal districts with lower staffing levels may be forced to turn down cases which would have gotten prosecuted had the offenses been committed in a jurisdiction with greater U.S. Attorney resources.

Environmental Litigation. Most recently, *TRAC* completed a study sponsored by the Bureau of National Affairs comparing federal environmental litigation in California versus the United States as a whole.[7] Both criminal matters dealing with the illegal discharge of toxic, hazardous or carcinogenic waste, as well as civil cases under the Clean Air Act, the National Environmental Protection Act, the Rivers and Harbors Act, the Water Pollution Control Act, Super Fund cases, and other federal environmental statutes.

While California now represents over 10 percent of the U.S. population and has over 1 in 10 of all assistant U.S. attorneys in the nation, federal prosecutors in the state processed only 6 to 7 percent of criminal environmental referrals and prosecutions nationwide, and just 3 percent of federal civil environmental matters in the U.S. [ENVIRONMENTAL SLIDE] There is also substantial variation among the four districts in California over their emphasis upon environmental matters. Northern California (San Francisco) saw the fewest environmental cases, filing not a single criminal prosecution between 1982 and 1990, and only six civil environmental cases. In the United States, environmental cases tend to be pursued using civil rather than criminal remedies in the federal courts. Indeed, there were nearly nine times as many environmental civil cases as criminal defendants charged with environmental crimes nationally from 1982 to 1990 (3,553 versus 404). However, in the Southern District of California (San Diego), environmental criminal filings were more than three times higher than civil environmental cases (21 versus 6). The Bureau of National Affairs, which had commissioned the study, has begun a series of investigative articles based on these data.[8]

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[7] See Susan B. Long, Federal Environmental Litigation: The Processing of Criminal and Civil Environmental matters by U.S. Attorney Offices in California During the Last Decade (3 Volumes), March 1991.

Prosecutorial Discretion. While many factors influence district to district variations in federal prosecutions, from the numbers, types, and quality of referrals U.S. Attorneys receive to the level of available staffing, the priorities of the individual U.S. Attorney can play a very significant role in shaping regulatory and enforcement priorities. Often when a new U.S. Attorney takes office, transactional data reveal a sharp shift in prosecution priorities as when Rudolph W. Guiliani took over from John S. Martin in the Southern District of New York (Manhattan) [S.NY SLIDE], or during the respective tenures of three U.S. Attorneys in Massachusetts (Edward F. Harrington, William F. Weld, and Robert Mueller, III) during the eighties [MA SLIDE].[9]

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[8] The first installment was published May 27, 1991 in the BNA California Environment Reporter.

CONCLUSION

These are but a few examples to illustrate the value of federal government transactional data. In summary, the computerization of government information and the concomitant increasing ability of modern computers to analyze massive collections of such transactional data at relatively little cost has provided individuals, businesses, and other organizations a powerful new tool for answering two crucial questions: First, are the agencies of government effectively managed, do they work? Second, are the agencies fair? Given the many important tasks government agencies perform in our society, the role of government transactional data in helping assure that these agencies are effectively and fairly managed can be vital to the continued well-being of this country.

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[9] See Susan B. Long, David Burnham, and Margaret H. DeFleur, "Federal Prosecutorial Discretion: A Comparative Analysis," paper presented at the annual meeting of the Law and Society Association, Berkeley, May 1990.

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Syracuse University

TRAC Information Resources

The principal aim of the Transactional Records Access Clearinghouse is to make information about federal government enforcement and regulatory activities more accessible and useful. To accomplish this mission *TRAC* uses the Freedom of Information Act to locate and obtain computerized administrative files of federal government agencies which have not been generally available before. Then, using its technical expertise, *TRAC* seeks to unravel what these undocumented data sources reveal about the focus, nature, and changing character of regulatory and enforcement activities.

This listing briefly describes some of *TRAC's* current information resources. More are continually being added. Based upon these information sources *TRAC* prepares regular reports, as well as specialized analyses, tabulations, charts and extracts to meet user needs. Additional data also can be sought to fulfill user requests. While *TRAC* prepares written reports, many of these data bases can also be provided by TRAC Reports, Inc. on computer media for those organizations who have the necessary skills and equipment and wish to undertake their own research projects. Data bases include documentation describing the categories of information contained in them and how they may be accessed.

Because many criminal and civil federal enforcement activities are processed through the Justice Department and the courts, *TRAC* reports and analyses can focus on a wide range of important regulatory and enforcement areas such as controlling drugs, cleaning up the environment, combating public corruption, collecting taxes and improving nuclear safety. Alternatively, the reports can focus on particular statutory provisions by United States title and code. Yet another possible approach would be to examine all the enforcement activities of a particular enforcement agency such as the Internal Revenue Service, the Environmental Protection Agency, the Food and Drug Administration, the Federal Bureau of Investigation or the Occupational Safety and Health Administration. Most reports can be limited to particular geographic areas, with comparisons to similar districts or the nation as a whole. Because much of *TRAC's* information on federal regulatory and enforcement activities goes back to the mid-1970's, long term trends for the nation or particular regions also can be developed.

Quality control with regard to data is not a simple matter. *TRAC* frequently assesses items for internal consistency, and compares information from different resources as a cross check for their degree of completeness and reliability. However, the data is only as accurate as the government files from which they were derived, for which *TRAC* cannot assume responsibility. Because of government restrictions, most files unless otherwise noted, do not contain the names of specific individuals.

ENVIRONMENTAL PROTECTION AGENCY

Environmental Enforcement files

1. *EPA civil federal court cases, 1973-1989:* case name, defendant name(s), facility, location, federal court district, federal court code, state, violations, and action taken.

2. *Environmental civil federal court cases, 1982-1990:* civil environmental federal court cases handled by U.S. Attorney offices (coverage wider than (1) above since other federal agencies with environmental jurisdiction are included; name of referring agency but not defendant(s) included).

3. *EPA environmental civil referrals declined by U.S. Attorney Offices, 1982-1990:* Environmental matters referred by EPA to U.S. Attorney offices by all federal agencies which are declined (involving at least an hour of a United States attorney's time).

4. *Environmental civil referrals declined by U.S. Attorney Offices, 1982-1990:* Coverage wider than (3) above since other federal agencies with environmental jurisdiction are included.

5. *Environmental criminal federal court cases, 1982-1990:* criminal environmental federal court cases handled by U.S. Attorney offices (coverage similar to (2) above but where criminal prosecution is involved).

6. *Environmental criminal referrals declined by U.S. Attorney Offices, Series A: Matters (separate files by year, 1974-1990), Series B: Immediate Declinations (separate files by year, 1980-1990):* case information on environmental referrals for federal criminal prosecution which are declined by U.S. Attorney offices because the office determines that they do not warrant federal prosecution.

Other EPA files

1. *Toxic Release Inventory, 1988 and 1989:* information by type of release, amount(s), and facility.

2. *EPA personnel, 1989:* personnel listing providing name, salary, position, and location of each NRC employee. [Annual files for other years, 1975-1988, 1990, under development.]

FEDERAL JUSTICE SYSTEM

Federal Court Case Series

1. *U.S. criminal court cases, 1980-1987, 1988, 1989:* Database includes data on parties, docket number, dates (filing and disposition), major offense (at time of charge and at disposition), case processing (plea, judge or jury trial), outcome, and sentencing.

2. *U.S. criminal court cases, 1970-1979:* same as (1) above but covering the decade of the seventies.

3. *U.S. civil court cases, 1980-1987, 1988, 1989:* Database includes data on parties including name(s), docket number, dates (filing and disposition), nature of suit, nature of parties, class action, cause of action, procedure, nature of judgment, amounts received.

4. *U.S. civil court cases, 1970-1979:* same as (3) above but covering the decade of the seventies.

5. *Federal civil court cases where U.S. is not a party, 1980-1987, 1988, 1989:* same as (3) above but covering all civil cases in the federal district courts in which the United States is not a party.

6. *Federal civil court cases where U.S. is not a party, 1970-1979:* same as (5) above but covering the decade of the seventies.

7. *Court cases processed in the federal appellate courts, separate files by year, 1970-1987:* detailed case information on appeals to the federal appellate courts from the U.S. district courts.

8. *Population of federal judicial districts, 1980-1989:* population estimates for each of the 94 federal court judicial districts for each year.

9. *Census data on federal judicial districts, 1980:* population, economic and housing data covering each of the 94 federal court judicial districts.

U.S. Attorney Case files

1. *Federal criminal prosecutions by U.S. Attorney Offices, separate files by year, 1974-1990:* Coverage similar to (1), (2), (7) above, but files are based upon Justice Department rather than court files, and include a variety of different items of information including referring agency, Justice Department prioritization and classification of the case, financial harm, as well as other data.

2. *Criminal referrals declined by U.S. Attorney Offices; Series A: Matters (separate files by year, 1974-1990), Series B: Immediate Declinations (separate files by year, 1980-1990):* case information on referrals for federal criminal prosecution which are declined by U.S. Attorney offices because the office determines that they do not warrant federal prosecution.

3. *Federal civil litigation in U.S. Attorney Offices, separate files by year, 1974-1990:* Coverage similar to (3), (4), (7) above, but files are based upon Justice Department rather than court files, and include a variety of different items of information including referring agency, classification of case, nature of proceeding, and outcome.

4. *Civil referrals declined by U.S. Attorney Offices, separate files by year, 1974-1990:* Similar to (2) above but covers civil rather than criminal matters.

5. *Staffing of U.S. Attorney Offices, 1989:* personnel listing providing name, salary, position, and location of each employee in each of the 94 district offices. [Annual files for other years, 1975-1988, 1990, under development.]

6. *Staffing of U.S. Attorney Offices, historical series (1980-1989):* the number of full-time equivalent attorneys in each of the 94 district offices for each of these years.

7. *United States Attorneys, 1970-1989:* the names of all United States Attorneys and the periods they served in each of the 94 district offices.

Other Judicial files

1. *Federal sentencing after the Sentencing Reform Act, 1987-1989:* United States Sentencing Commission files of federal criminal cases sentenced in whole or in part after the new sentencing guidelines of November 1, 1987.

2. *Federal parole decisions, 1978-1986:* processing of federal offenders by the U.S. Parole Commission. Detailed data on the outcome of parole hearings including race and ethnicity, judicial district, type of hearing, court release date, offense, sentence, severity, salient factor score, sentencing guideline type, institution, parole date, parole decision and reason.

3. *Administrative office of the U.S. courts: Pretrial Services Agency Files, 1983-1986:* detailed interview and initial bail and detention hearing data on federal criminal defendants collected by Pretrial Services Agency personnel, including year of birth, citizenship, sex, race, marital status, number of dependents, type of residence, length of residence, employment, monthly earnings, education, medical and psychiatric treatment, alcohol and drug abuse, criminal history (last 12 months), major offense charged, number of additional offenses charge, arrest date, investigating agency, type of counsel, danger factor reported to court, bail amount and action(s).

INTERNAL REVENUE SERVICE

Federal Tax Enforcement files

1. *IRS audits of individual tax returns, 1986-1989:* summary statistics on the number of audits, and odds of audit, in each state and IRS district in the country by year.

2. *IRS audits of individual tax returns, 1962-1980:* [illegible] types of audits, the odds of audit, frequency and rate of reporting errors, additional taxes and penalties recommended, and IRS auditor time by year and type/income class of taxpayer.

3. *IRS audits of corporate tax returns, 1962-1980:* similar to (2) above but covering corporations by year and asset size of the firm [under preparation]

4. *IRS audits of tax returns, historical series (1968-1988):* summary statistics by year on the number of audits, rate of audits, and additional taxes and penalties covering all federal tax audits, including individual, corporate, estate, gift, employment and excise returns.

5. *IRS collection enforcement actions, 1986-1989:* summary statistics by year on first notices, taxpayer delinquent accounts, liens, levies, and seizures by region and/or state and IRS district.

6. *IRS collection enforcement actions, historical series (1968-1988):* summary statistics by year on the number and rate of taxpayer delinquent accounts, and amounts collected.

7. *Criminal tax prosecutions, historical series (1968-1988):* summary statistics by year on the number and rate of criminal tax indictments.

8. *Criminal tax cases in the U.S. District Courts, Series A (1970-1989), Series B (1974-1990):* detailed information on each defendant prosecuted in the federal district courts for tax offenses.

Taxpayer Compliance Measurement Program files

1. *Tax misreporting on individual federal income tax returns by line item on the return (1985 tax year returns filed during 1986), Table 010 series, Table 40X series, Table 990 series:* detailed statistics covering hundreds of line items on a tax return from IRS's most recently completed TCMP survey; provides the frequency and amounts of both over-reporting and under-reporting by tax return line item, and by size of errors, for different income classes, types of taxpayers, and regions of the country. Includes estimates on negligence and fraud.

2. *The over-reporting and under-reporting of federal income taxes by individuals, historical Table 000 series, 1963-1979:* merged file of extent of over-reporting and under-reporting for different taxpayer groups and regions of the country from covering each of seven major TCMP surveys completed by IRS.

3. *Tax misreporting on individual federal income tax returns by line item on the return, historical Table 010 series, 1963-1985:* merged file covering each of nine major TCMP surveys completed by the IRS providing detailed statistics of misreporting on hundreds of line items on federal individual income tax returns.

4. *The over-reporting and under-reporting of federal income taxes by corporations (1981 and 1988 processing years):* detailed statistics from IRS's TCMP survey on the frequency and amounts of both over-reporting and under-reporting for corporations with up to $10 million in assets [under development].

5. *Taxpayer compliance panel data, 1970-1974:* detailed individual-level data from TCMP audits of individual tax returns in a national panel of taxpayers randomly selected on the basis of returns filed in 1970 and followed for two or four

Other Tax files

1. *Federal tax returns, 1986-1989:* summary statistics on the number of each type of federal tax return filed by year in each region, state and IRS district in the country.

2. *Federal tax returns, historical series (1968-1988):* summary statistics by year on the number of federal tax returns filed each year and gross revenues collected.

3. *IRS budget and staffing, historical series (1968-1989):* summary statistics by year on the number of IRSemployees, budget expenditures, the rate of IRS employees per 1,000 returns, and the budget dollars per $1,000 collected.

4. *IRS personnel, 1989:* personnel listing providing name, salary, position, and location of each IRS employee. [Annual files for other years, 1975-1988 and 1990, under development].

NUCLEAR REGULATORY COMMISSION

Inspection and Enforcement files

1. *NRC inspection and enforcement of nuclear reactor facilities, 1974-1989:* detailed information on each inspection and enforcement action of all power plants taken by the NRC.

2. *NRC inspection and enforcement of non-nuclear reactor facilities, 1974-1989:* detailed information on each inspection and enforcement action of all power plants taken by the NRC.

Other NRC files

1. *Reactor index:* detailed information on nuclear reactor facilities licensed by the NRC.

2. *NRC Mini-Master File:* detailed information on non-reactor facilities licensed to handle nuclear materials by the NRC.

3. *NRC personnel, 1989:* personnel listing providing name, salary, position, and location of each NRC employee. [Annual files for other years, 1975-1988, 1990, under development.]

SUPPORTING DATABASES

Federal Personnel Data files

1. *Federal civilian employees, 1989:* personnel listing of federal civilian employees, including employee name, agency, state (or U.S. territory or foreign country), county, city or place, occupation, pay plan, grade, work schedule, supervisory status, and salary information. [Annual files for other years, 1975-1988, 1990, under development.]

Census files

1. *Population estimates for counties, 1980-1989:* population estimates for each county in the United States by year.

2. *Census data from the 1980 population and housing surveys:* detailed information files from the 1980 Census.

Further detailed information is available [illegible] data sets. If you would like information about these, or other studies not listed here, please contact one of our offices (addresses listed below).

Syracuse Office:
478 Newhouse II, 13244
(315) 443-3563
(fax 315-443-3196)

Washington, D.C. Office:
Suite 303, 666 Pennsylvania
Avenue, S.E., 20003
(202) 544-8722
(fax 202-547-5481)

(SLIDE 1)

IRS Audits of Individual Income Tax Returns

	Percent
Nevada	1.9 %
Wyoming	1.5
NY (Manhattan)	1.4
North Dakota	1.1
Georgia	1.0
IL (Chicago)	0.9
NY (Brooklyn)	0.7
PA (Philadelphia)	0.6
Connecticut	0.6
Massachusetts	0.5
New Jersey	0.5
US Average	1.0 %

(SLIDE 2)

IRS Installment Agreements
Taxpayer Delinquent Accounts

	Percent
Indiana	22.7 %
TX (Houston)	19.0
OH (Cleveland)	17.2
CA (San Francisco)	16.3
TX (Dallas)	15.5
New Jersey	13.3
NY (Manhattan)	8.7
CA (San Jose)	7.2
OH (Cincinnati)	6.4
CA (Los Angeles)	5.9
PA (Philadelphia)	5.3
TX (Austin)	5.3
NY (Brooklyn)	5.1
PA (Pittsburgh)	3.4
New Hampshire	2.2
US Average	12.7 %

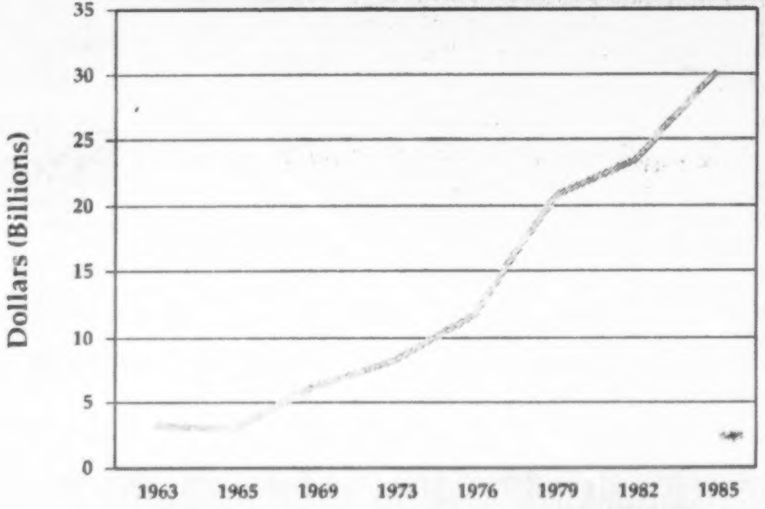
(SLIDE 3)

IRS Seizure Rate
Taxpayer Delinquent Accounts

	Percent
TX (Austin)	4.1 %
CA (San Jose)	3.1
Fl (Ft. Lauderdale)	2.7
PA (Pittsburg)	2.6
CA (Los Angeles)	2.4
NY (Brooklyn)	1.9
Connecticut	1.3
TX (Dallas)	0.4
TX (Houston)	0.3
FL (Jacksonville)	0.3
Massachusetts	0.3
New Jersey	0.2
CA (San Francisco)	0.2
NY (Manhattan)	0.2
PA (Philadelphia)	0.2
US Average	0.5 %

Tax Underreporting on Individual Federal Income Tax Returns

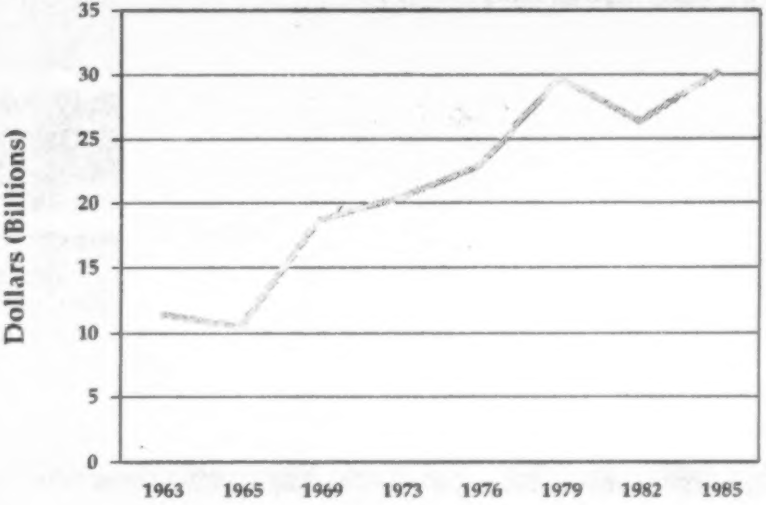
IRS Estimate



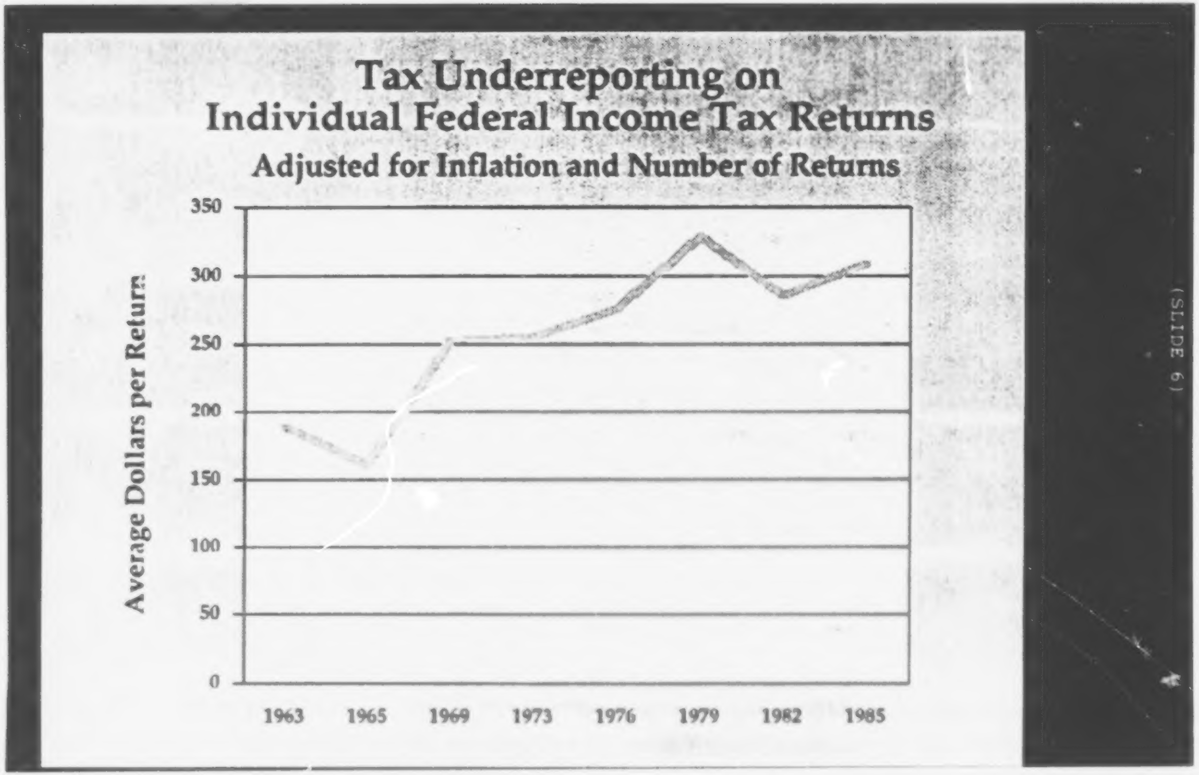
(SLIDE 4)

Tax Underreporting on Individual Federal Income Tax Returns

Adjusted for Inflation



(SLIDE 5)



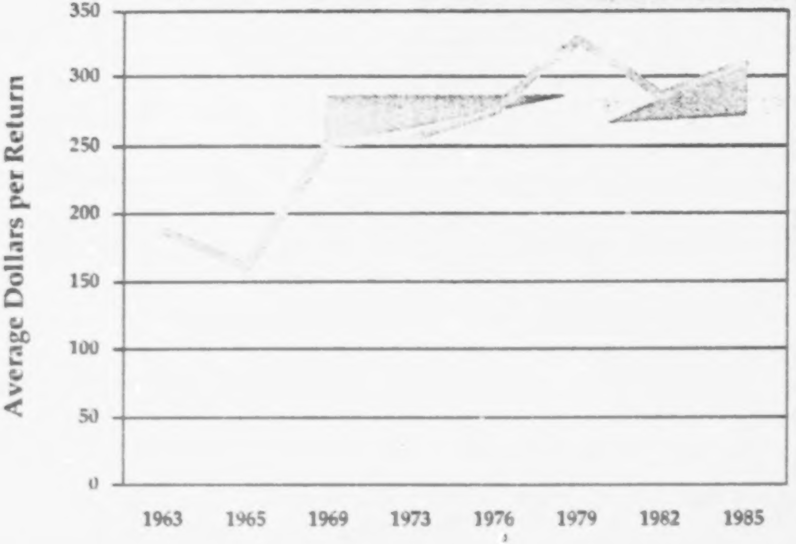
Tax Underreporting on Individual Federal Income Tax Returns

Adjusted for Inflation and Number of Returns

(SLIDE 6)

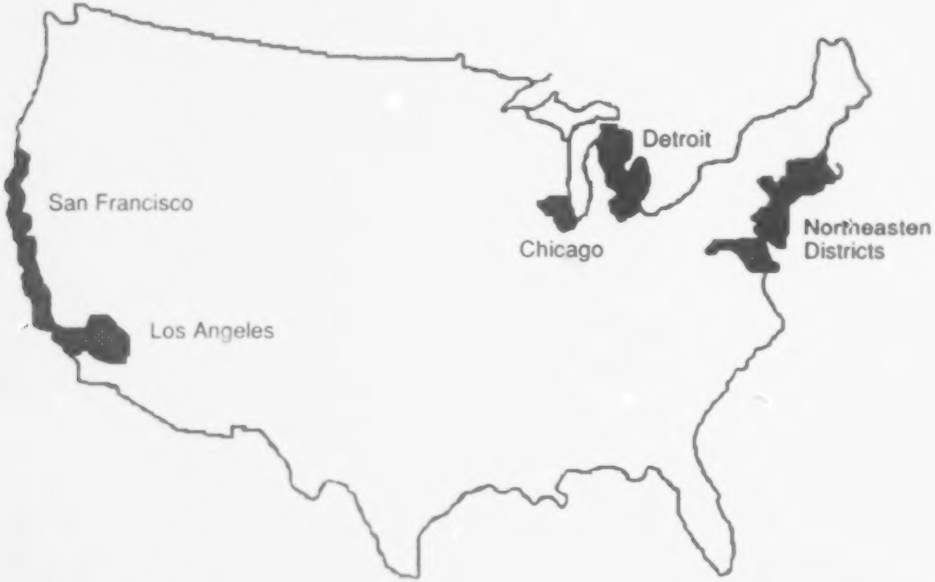
Tax Underreporting on Individual Federal Income Tax Returns

Adjusted for Inflation and Number of Returns

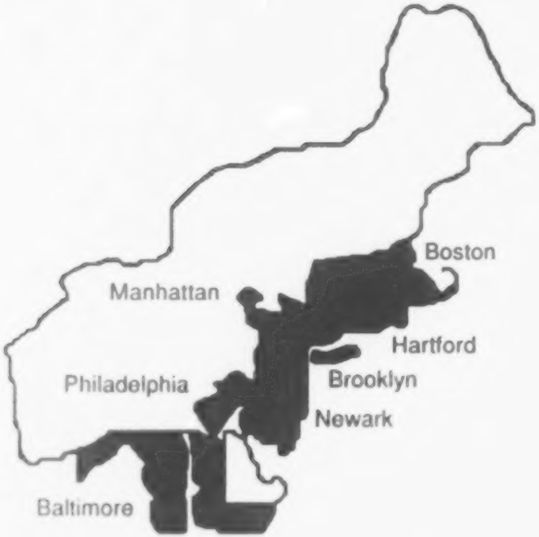


(SLIDE 7)

Federal Judicial Districts Used in TRAC Study

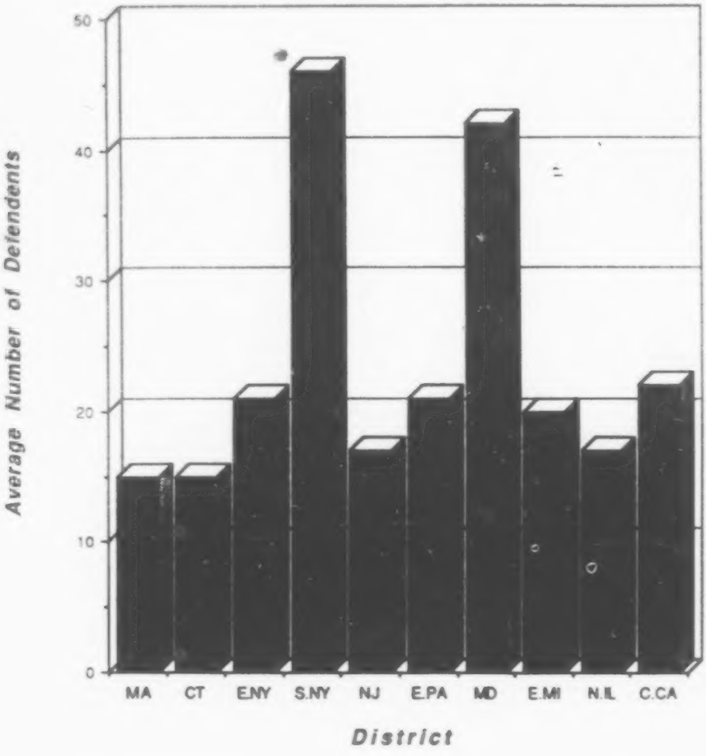

Detroit
San Francisco
Chicago
Northeasten Districts
Los Angeles

North East Urban Corridor Districts

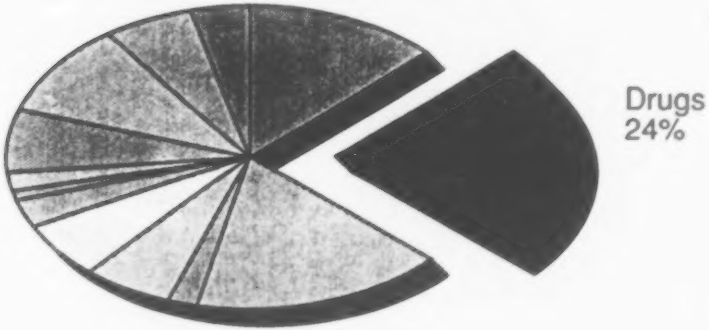

Boston
Manhattan
Hartford
Philadelphia
Brooklyn
Newark
Baltimore

(SLIDE 10)

AVERAGE NUMBER OF CRIMINAL DEFENDANTS
(Per 100,000 Population, Age 18 and Over)
1980 to 1987

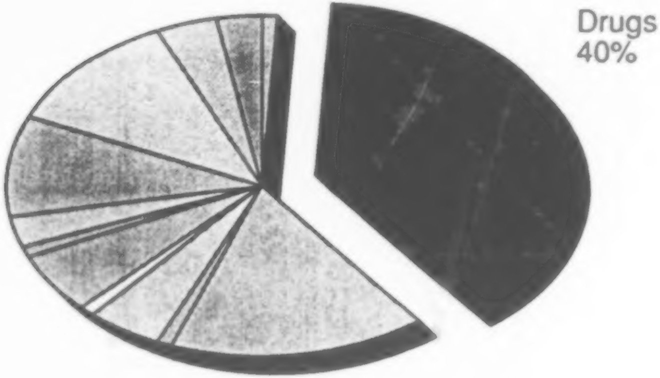


Criminal Charges Filed Against Individuals
United States - 1980 to 1987



(SLIDE 11)

Criminal Charges Filed Against Individuals
E. NY (Brooklyn) - 1980 to 1987



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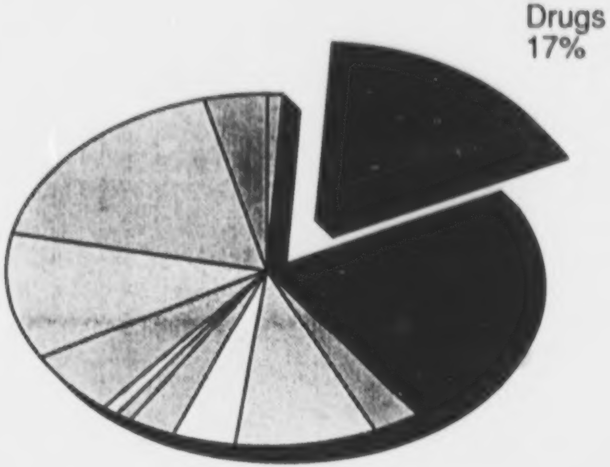
Criminal Charges Filed Against Individuals

C. CA (Los Angeles) - 1980 to 1987



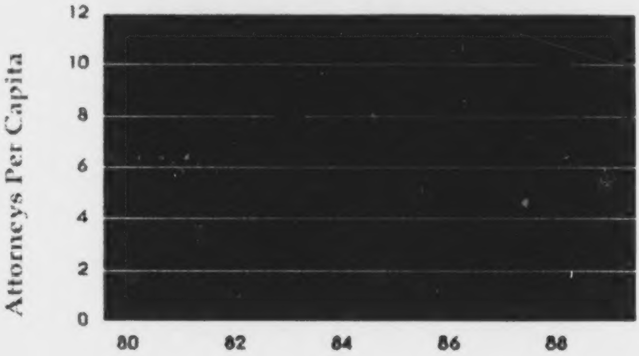
(SLIDE 13)

(SLIDE 14)

Number of Attorneys Per Capita 1989

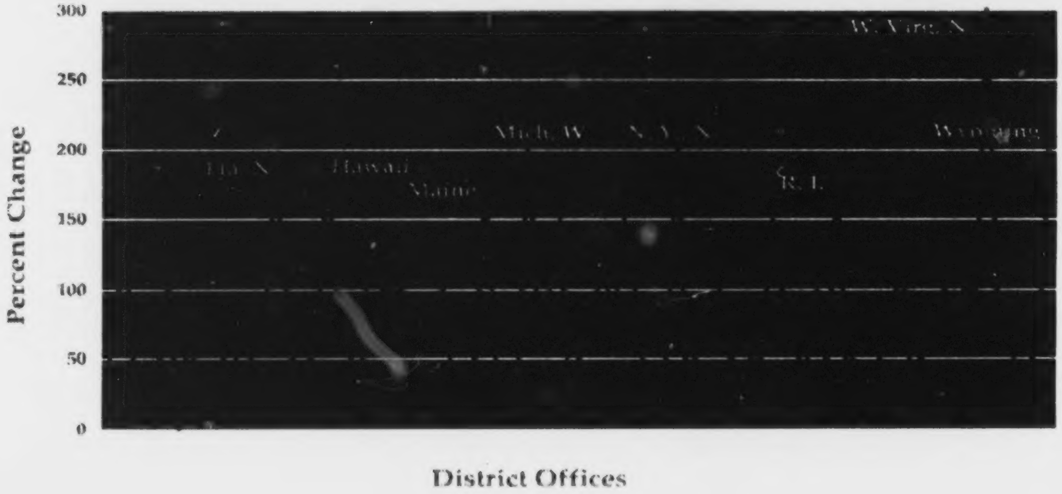
W. Virg, S	20
Wyoming	19
Vermont	17
U. S.	11
Mich, E	9
N. J.	9
Cal, C	8
Mass	7
N. Y., N	6

(SLIDE 15)



Growth in Federal Prosecutors (per million population)

Percent Change in Number of Attorneys Per Capita, 1980-1989



(SLIDE 16)

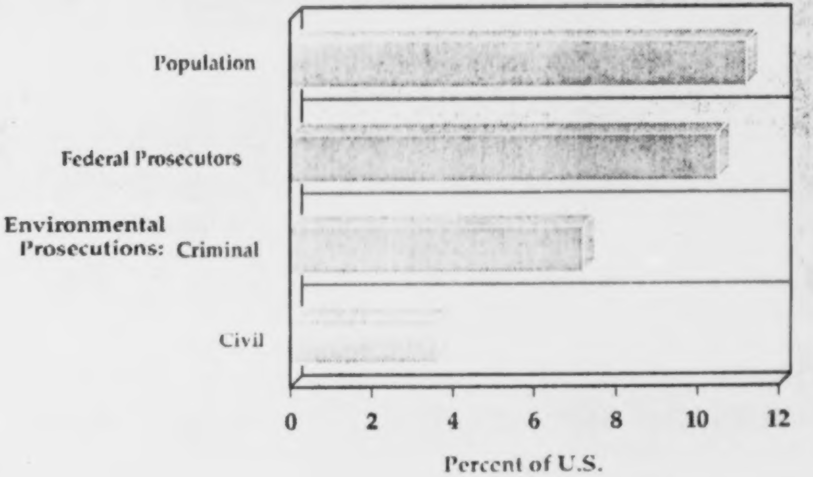
99

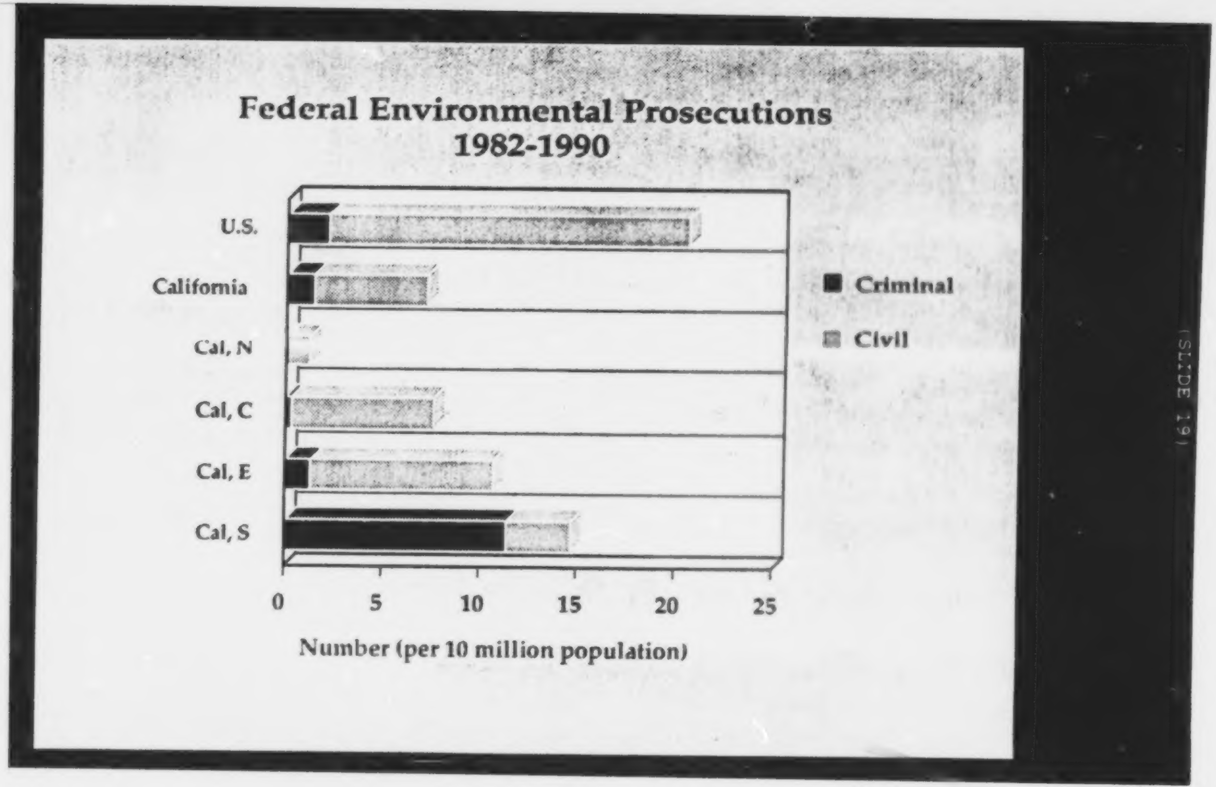
100

Percent Change in Number of Attorneys Per Capita, 1980-1989

(SLIDE 17)

California Compared to U.S.





Federal Environmental Prosecutions
1982-1990

(SLIDE 19)

Mr. WISE. Well, the good news for you, I guess, is my questions will be kept short. You were talking about the highest technology, I need you to bring it down to the most basic level for me.

For data, you went to the Department of Justice. They didn't give you a CD-ROM disk, did they?

Ms. LONG. No.

Mr. WISE. This information, did you request it? How did you request it?

Ms. LONG. We made a series of freedom of information requests for a variety of different kinds of information, and we've largely obtained them on computer magnetic tape.

Mr. WISE. So they were cooperative to you to that extent?

Ms. LONG. Yes.

Mr. WISE. I just want to know the secret. Apparently, you know something I don't. They've not been that cooperative with us on anything that I'm aware of. [Laughter.]

Ms. LONG. Well, we were a bit persistent, and we've done homework, in terms of what kinds of data that they were collecting, so we knew they had it.

Mr. WISE. Did you run into roadblocks on any of it?

Ms. LONG. Well, there are always certain roadblocks that one expects just in the process of getting the information.

Mr. BURNHAM. All bureaucracies dance around some. But if you're persistent and keep asking, and you know what you want, you usually get the data in the end. You may know that Sue Long brought 13 suits under the Freedom of Information Act against the IRS in the last 15 years, and has won 12 of them. One is pending.

One of the most favorable decisions says that the agencies have to give you data on computer tapes, et cetera, media, if it's available. The Justice Department knows that, even though they sometimes try to hide things. The IRS is now very cooperative with Sue. [Laughter.]

Ms. LONG. I think it takes a while; it's a new kind of information, this computerized information, so you'll run into some people who don't realize they're supposed to make it available, and you have to talk hard to try to convince them that it needs to be made available.

Mr. WISE. Let me turn to Mr. Schiff, because I know we're going to have to go in 1 minute.

Mr. SCHIFF. Thank you, Mr. Chairman. I was just going to ask one followup question exactly on that. I'm afraid, like the President of the United States, I am computer illiterate, I regret to say. I'm learning fast from my children, who have this in the classroom; we never had it.

So I'm going to ask a question that may be very elementary. If you wish to request actual computer information that you may make personal use of rather than someone else's translation from it, that means they must make a copy of their—they're not going to give you their original. They must make you a copy. Is that an easy process?

Ms. LONG. Yes.

Mr. SCHIFF. OK. That's what I wasn't sure of.

Ms. LONG. In fact, it's a lot easier than putting paper through a Xerox machine, because computers are high speed, and you just give one command, and it's just like copying on your VCR to copy it.

Mr. **Burnham**. Mr. Schiff, if the privacy requirements require you to delete certain names, or if they want to take the names of the judges off a particular tape, they can just instruct the computer to do it. It's much easier than going through the old blacking out process.

Mr. **Schiff**. So an objection, in your opinion, cannot be raised by an agency that we can't do this because it's too difficult to provide a computer facsimile of what we had. According to your testimony, it is relatively easy for agencies to do?

Mr. **Burnham**. It's much cheaper than paper.

Mr. **Schiff**. All right. I just wanted to be sure of that, in case that argument was raised. Thank you, Mr. Chairman. I just want to compliment the witnesses.

I've been working trying to get some information together and struggling with it, I might add. I'm on the Judiciary Committee as well as on your subcommittee, so I deal with the Department of Justice all the time, trying to find out, for example, from the Department of Justice, questions like how often do they bring a case of felony possession of firearm.

Mr. **Burnham**. We can tell you. We'd be happy to work with the committee.

Ms. **Long**. That kind of information is on our data.

Mr. **Schiff**. I don't control the purse strings, however, that might have to pay for that, but as a second example, in how many cases was felony possession of a firearm brought only because the felon committed another crime? And you wouldn't otherwise bring it, if you found a felony possession of firearms. I can't get that information, because they say it isn't assembled enough. I suspect it is, you have just got to know where to look.

So I compliment you on this presentation, the witnesses in this presentation, and you in having this hearing, Mr. Chairman.

Mr. **Wise**. Thank you, Mr. Schiff. We may ask the witnesses to come back with some of that information. TRAC seems to be a do-it-yourself organization which—what I hear you saying is that give you access to data, and you'll do the rest.

Is it sufficient for the data to be available on disk or tape? And then my followup question, then, is would online access help?

Mr. **Burnham**. We are supported by foundations now. We are trying to get newspapers to pay us to meet our operational costs so that we can provide them either a report, and eventually we hope that we will teach them to do their own research on a tape. Some of the big newspapers have a mainframe computer and have the skills to do that.

However, on the NRC study that we're doing, we have a grant that we're going to provide information on a State or a utility or a year on the diskette, which would allow an individual newspaper or public interest group——

Ms. **Long**. Or a library.

Mr. **Burnham** [continuing]. Or a library to just get a diskette and do it on your personal computer at home.

Ms. **Long**. And in terms of access, it's very easy to turn one form—once you have electronic media, it's very easy to turn it from one form into another form. So given that some of these data sets are very massive in size, it makes sense to provide it in some form such as magnetic tape or CD-ROM rather than on online access, which would be relatively expensive.

We can get online access, for example, to certain NRC data from Syracuse, but we can't afford the long distance charges to access it that way.

Mr. Burnham. And we don't really need it. Tape is very fine for us or CD-ROM, when we move into that technology.

Mr. Wise. I'm just fascinated. My sense is that, being creative, you're obtaining information that some congressional committees are having some difficulty extracting from agencies, possibly because we don't always know what we're asking for, but also because, I think, they are just bucking us.

Mr. Burnham. Mr. Wise, I am a personal old friend of Lowell Dodge, the General Accounting Office official in charge of examining the Justice Department. Lowell, Sue and I are talking, and he's doing some work, and we're doing some work, and we hope, eventually, to get a more intimate cooperation going with the GAO.

Mr. Wise. At this point, there are two votes that are coming, a 15-minute vote followed by a 5-minute vote. I cannot endanger my voting record any further. The best thing I ever did was make sure I didn't have 100 percent starting out.

At this point, then, I'll put the hearing in recess. What I would like to ask of this panel is not that you necessarily stay around, I appreciate it, but we could send you some questions in writing, and you could answer for the record, and then we might then be back to talk to you by telephone.

Mr. Bass, let me ask you, it's going to be probably 20 to 25 minutes. Is that acceptable to you, or would you rather we come back at another time?

Mr. Bass. Whatever is convenient for you.

Mr. Wise. OK. What I'll do, then, is come back. I thank the panel, and the hearing is in recess.

[Recess taken.]

Mr. Wise. The hearing of the Government Information, Justice, and Agriculture Subcommittee will resume. There's been a promise of at least 5 minutes before the next vote.

When last we left, we were turning to our third panel, which will be Gary Bass, executive director of OMB Watch, Washington, DC, accompanied by John Chelen. As you know, the subcommittee has a practice of swearing in all witnesses. If you'd stand and raise your right hand.

[Witnesses sworn.]

Mr. Wise. Mr. Bass, Mr. Chelen, any written statement will be made a part of the record in its entirety, and I'd like you to summarize it any way you wish.

Mr. Bass. Mr. Chairman, I'm going to let John Chelen begin. I must say it's nice to be here and have such an intimate setting now.

Mr. Wise. We appreciate both of you for being here and taking the time and waiting. You all have a lot to say and to contribute to this. Thank you. Mr. Chelen.

STATEMENT OF JOHN C. CHELEN, EXECUTIVE DIRECTOR, THE UNISON INSTITUTE, WASHINGTON DC

Mr. CHELEN. Thank you, Mr. Chairman. It's my pleasure, to be here today. We're going to try to make this personal today instead of doing an electronic demonstration. Maybe it's unfortunate, but we'd like you to try to use your imagination.

Mr. WISE. Why is that unfortunate?

Mr. CHELEN. Unfortunate for us, because I'm sure my words will fail me today. RTK NET is an online service, and it's probably very appropriate to have a visual presentation. RTK NET is important for these kinds of situations where people need to get information very quickly. I think that's what should be the tenor of my comments overall.

Unison Institute, of which I'm the executive director, concentrates on information policy in trying to develop technical and computer solutions for Federal agencies and for nonprofit associations.

We think that online access must be a significant and key part of any government dissemination activity. RTK NET is intended to be a research project or an experiment in the use of that technology. Hopefully it will set an example for Federal agencies, and for other organizations, on how they might disseminate information.

What I want to concentrate on today is to provide a description of RTK NET and the services we're providing to grassroots organizations, the people at the front lines who really need this information.

They're not as well served as intermediaries and the insiders in Washington who have easier access to information. I want to provide a description of those users of RTK NET, and provide a detail on how that information has specifically been put to use.

First, to begin with, what is RTK NET? RTK NET was a response to the creation of the toxic release inventory. EPA is required by the passage of the Emergency Planning and Community Right-to-Know Act, to maintain an inventory of toxic chemical releases to the environment.

We think this law provides an extraordinary opening for community involvement. We wanted to pitch in and help EPA establish that online inventory to the best degree that it could. We had worked with the technology required to provide online services for many years and developed systems for commercial, nonprofit, and other governmental agencies.

In order to take advantage of this opportunity, a diverse group of 38 national, State, and local public interest organizations agreed to create a computer network, RTK NET, centered on the use of this right-to-know information.

RTK NET was designed to help them collectively make more effective use of this information. However, RTK NET also had another goal in mind, to demonstrate to EPA an example of how the TRI should be operated by EPA itself.

EPA was quite direct and forthright in moving along with its own plans for the National Library of Medicine.

However, we believed that better services could be provided, especially to grassroots and other local organizations that need this data. So by creating and actually operating RTK NET, we could demonstrate these alternatives, and we could do it in a way that would keep us honest. We would know what was necessary by actually doing the hand holding and working with local groups. We would know what their requirements really were. We could continue, on an evolving basis, to determine what users really needed, and how to enhance those services, mainly to the end that EPA could improve its own legislatively mandated system.

With those goals in mind, RTK NET then was intended to provide four services. The first was electronic mail, sending private electronic messages between individuals so they could facilitate their joint activities.

The second was electronic conferencing, whereby discussions and group projects can electronically share messages and files. A group dialog can be established, joint work products developed, and consensus achieved.

The third is access to news and other information. Typically, fast breaking alerts, general news, or recent reports, can be made available to a large group of people with relatively little effort. You can also save a considerable amount of money. Postage, labor, and all the attendant expenses can be taken substantially reduced.

The fourth, and perhaps the most unique part of RTK NET is data base access. The full TRI data base, as well as other data files, are available through RTK NET along with a full range of contemporary software tools that are necessary to complete a professional analysis and report. These tools are provided in a way that makes it suitable for varying levels of sophistication of the users themselves.

While there are other local national networks that are successfully providing data and other services, we think that RTK NET is breaking new ground because of its large volume of national data. Users who access RTK NET are able to find out the sources of pollution in their own neighborhoods and communities, and they are the ones who are personally responsible for finding out how to stop these releases.

As I said, RTK NET assumes that there are vast differences in the skill levels of the users who are interested in this information, so there have to be various levels of user sophistication of the software tools that are available for these users to select.

Any skill level, from novice to professional, can find the type of software tools they need. A novice can select a less complex choice for obtaining data. The computer could ask them a series of simple questions on the chemical, the State, and the year of interest.

After they respond to these questions, a listing of the facilities and the amounts that they release would be presented to them in descending order by volume, with a grand total at the end.

A more experienced user would use a more powerful option where the choices of content and format would be broader, the processes would be longer, and inquiry rules more strict. Finally, the most sophisticated user would use a complex computer language to target the exact information that they wanted and specify the format they need.

We think we have to be able to serve all of those various levels in order to provide the full range of information capabilities that are necessary to fully implement the law.

Who are the RTK NET users? As I said earlier, it was initially formed to help a group of 38 national, local, and grassroots organizations, and it very much has focused on their specific pollution prevention activities.

Right now, they do continue to make up the greatest portion of RTK NET users. However, because the goal of pollution prevention entails joint activities, and because these solutions depend upon all sectors of the community, RTK NET has been opened up to other users.

Anyone with a commitment to use the information and to work cooperatively to address the issues of toxic chemical releases has been welcome to join RTK NET. We did have a limitation, mainly self-imposed, of 200 users. That was initially targeted as the number of people that we could provide technical support to, mainly because of our own budgetary and staffing targets.

Since then, the number of users has increased, and we have more than 275 participants. On page 7 of the written text, there is a chart that shows the relative size of the RTK NET user groups. Roughly half are public interest organization, typically grassroots, but they do include State and national organizations as well.

One-fourth of these are Government, primarily EPA. The others represent business, media, and academic and research interests. About half of these users are from our three regional target areas, the northeast, the Great Lakes, and the Gulf Coast.

These three areas were targeted because they represent high concentrations of releases, according to the TRI data. We thought we'd find a very willing and capable group in every one of these locations who could very tangibly work with the information.

The third area, or the second area, actually, is how has RTK NET been used? One of the fabulous things about the TRI is that it does open up a direct channel between centralized Federal Government and popular local efforts.

Through RTK NET, which is probably an adjunct to that channel, the typical barriers to access information have been eliminated. Users can avoid the distillation, the overrefinement, the repackaging, and the pricing, that is common with other Government data.

Users are able to shorten that distance between themselves and this evidence that's very relevant to their community interests. Users have complete access to the entire national TRI data base of over 4 million records and perhaps 750 million individual data elements.

These data elements cover individual local facilities and the actual information these facilities report. For example, a user can find out how much lead was released to the air, land, and water by any specific industrial facility in any jurisdiction in the last 3 years, 1987, 1988, and 1989, for which the data are available.

Users can sort this information by city, county, State, zip code, or congressional district. They can compare totals by year, by types of facilities throughout the entire country. They can create files they can transfer or download to their own PCs and use in their own spreadsheets and data base management programs.

Examples that we've discovered show the leverage that's possible. Essentially, local groups can be deputized perhaps unofficially and indirectly, but certainly intentionally, to help enforce Federal policies and program goals.

Moreover, these examples are outside of the official planned local activities that were originally established by the legislation. There are no direct costs to the Federal Government for these activities outside of the information distribution mechanisms themselves.

I think I'd like to talk about three general categories of the uses of RTK NET. The first would be local efforts at individual facilities, around the activities of these facilities, the second would be general policy development, and the third would be city, State, and other jurisdictional initiatives.

Let's take an example of efforts at individual facilities. In Chicago, Citizens for a Better Environment, working with the League of Women Voters, the Sierra Club, and other local organizations, became concerned with the air emission reports of a particular furniture company.

The size of these emissions triggered concern and greater research, leading directly to the discovery of permit violations where the facility exceeded permit emission levels. Additionally, they were found to lack other permits required for construction and operations. Everybody is expecting litigation and prosecution at the State level as a result of this. Additionally, other local companies have opened dialogs with these groups because of the likely events that may occur if their facilities are further researched as well.

If we look at general policy development, several organizations have used the information to further their own general policy and programmatic goals. Zero population growth, for example, looked at the general impact of higher density habitation. U.S. Public Interest Research Group considered and projected the overall volume of toxic releases in particular industries, including chemicals not included in the TRI. The National Association of Manufacturers is targeting companies who have major releases in order to promote the development of policy alternatives and remedial programs.

At the political arena, initiatives are occurring at all levels. One good example has occurred in Maine. The Maine National Resources Council is tracking corporate emitters as part of a statewide industrial toxics project to reduce emissions. They are working directly with companies to voluntarily reduce the emissions of 17 priority chemicals.

Finally, a commercial group is advising on socially responsible investment. They are using the TRI data as a factor in ranking the social benefits, or harm of the activities of specific companies. This ranking is then provided to socially aware investors.

In conclusion, RTK NET and the use of TRI data should stand as an example of the leverage that is possible by opening direct channels to Government data. Use of online technology per se can make this fast, inexpensive, and easy.

Government programs should include this mechanism as a specific tool to advance programmatic needs. I'm certainly happy to entertain any other questions that you might have.

[The prepared statement of Mr. Chelen follows:]

Statement of

John C. Chelen, Esq.
Executive Director
The Unison Institute

Before the
Government Information, Justice and Agriculture Subcommittee
of the
Committee on Government Operations

On
Creative Uses of Government Data
June 19, 1991

Good morning. My name is John Chelen and I am the Executive Director of The Unison Institute, a nonprofit educational and research organization that focuses on information policy and the federal government's computerization activities.

A major issue of interest to us is how government information is collected and distributed, especially in electronic or digital formats. Because of that interest, we are co-sponsors of RTK NET, a novel electronic information service that is providing on-line access to environmental information.

My testimony today will cover three main areas concerning electronic public access:

- A description of RTK NET and the services we are providing to grass-roots environmental organizations;
- A description of the users of RTK NET; and
- A description of how RTK NET information has been put to use.

What is RTK NET?

The Toxic Release Inventory (TRI) that EPA is required to maintain by the Passage of the Emergency Planning and Community Right-to-Know Act of 1986 (Title III of the Superfund Amendments and Reauthorization Act) created an extraordinary opening for community involvement in major chemical accident prevention, emergency preparedness, and chemical release reporting. Because of that law, there is a federal legal mandate for citizen participation in chemical health and safety planning and monitoring at the local level.

In order to take advantage of the new opportunities for pollution prevention that this law created, a diverse group of 38 national, state, and local public interest organizations agreed to create a computer network centered on the use of chemical right-to-know information. This computer network, RTK NET, was designed to improve their collective ability to access and make effective use of chemical right-to-know information and national chemical safety expertise.

However, RTK NET also had another goal in mind, to demonstrate to EPA an example of how the TRI should be operated by EPA itself. We have worked with the technology required to provide on-line services for many years and have developed systems for commercial, non-profit, and other government agencies. We knew that better services could be provided that would make the data more useable. By creating and operating RTK NET, we could demonstrate alternatives, determine what users really need, and continue to enhance services, to the end that EPA improves its legislatively-mandated system.

RTK NET provides four key services:

- Electronic Mail
  Members can send private electronic messages to each other accelerate their interaction and joint activities.

- Electronic Conferencing
  Discussions and group projects can electronically share electronic messages and files. A group dialogue can be established, joint work products developed, and consensus can be achieved.

- Access to news and other text information
  Fast-breaking alerts, general news, or recent reports can be made available to a large group with relatively little effort. Postage, labor, and delay can be eliminated.

- Database Access
  The TRI and other environmental information is available with a full range of contemporary software tools that are necessary to complete a professional analysis and report.

What makes RTK NET unique is that it provides database access. While there are other local and national networks that are successfully linking environmental organisations together and helping them organise and carry out their missions, RTK NET is breaking new ground by providing a large volume of national data. Users who access RTK NET are able to find out sources of pollution in their communities and who personally is responsible for these releases.

Users have complete access to the entire national TRI database of over 4 million records and perhaps 750 million data elements. These data elements cover individual local facilities and the actual information they report. For example, a user can find out how much lead was released to the air, land, and water by the "Sterling Plumbing Works" in 1988.

Users can sort this information by city, county, state, zip code, or congressional district and they can compare totals by year by the types of facilities around the country. They can create files that they can transfer (download) to their own PC's and use in their own spreadsheet and database programs.

Importantly, RTK NET assumes that there are vast differences in the skill levels of users who are interested in this information. Therefore, there are various levels of ease or sophistication of software tools that are available for the users to select. Any skill level, from novice to professional, can find the type of software tools they need. For example, a novice could select a less complex choice for obtaining data. The computer would ask a series of simple questions, such as the chemical, state, or year of interest. After the use responded, a listing of the facilities and the amounts they released would be presented, in descending order by volume, with a grand total at the end. A more experienced user would use a more powerful system where the choices of content and format would be broader, but the process would be longer and more strict. The most sophisticated user would use a complex computer language to target the exact information and specify the exact format they might want.

Who Are the RTK NET Users?

RTK NET was originally aimed at grass roots organizers and local activists. It was intended to serve a small group that focused on very specific pollution prevention issues. As such, these public interest participants continue to make up the greatest portion of RTK NET users. However, because the goal of pollution prevention entails joint activities and solutions developed by all sectors of the community, RTK NET has been opened up to other users. Anyone with a commitment to use the information and to work cooperatively to address the issues of toxic chemical releases has been welcomed to join RTK NET (however subject to our self-imposed size limit of 200 users based upon budgetary and staffing targets.)

Today we have more than 275 participants. On page 7, the chart shows the types of RTK NET users. Roughly half are public interest organizations, one-fourth are government, and the others represent business, media, and academic/research interests. About half of the users are from one of our three regional target areas: the Northeast, the Great Lakes, and the Gulf Coast (all three areas represent high concentrations of releases according to the TRI data.)

How Has RTK NET Been Used?

The TRI opens a direct channel between centralized federal government and popular local efforts. Through RTK NET, the typical barriers to access information have been eliminated. Users can avoid the distillation and over-refinement, repackaging, and pricing that is common with other government data. Users are able to shorten the distance between themselves and this tangible evidence that's relevant to their community interests.

The examples that we've discovered show the leverage that is possible. Essentially, local groups can be deputized, perhaps unofficially and indirectly, to help enforce federal policies and programs. Moreover, these examples are outside of the official planned local activities that were originally established by the legislation. There are no direct costs to the federal government for these activities, outside of the information distribution mechanisms themselves.

These examples fall into three general categories:

- Efforts at Individual facilities;
- General policy development;
- City, State, and other Jurisdictional initiatives.

Let's take an example of efforts at individual facilities. In Chicago, Citizens for a Better Environment, working with the League of Women Voters, the Sierra Club, and others, became concerned with air emissions reports of a particular furniture company. The size of these emissions triggered greater research, leading to the discovery of permit violations, where the facility exceeded emission limits and was found to lack other permits required for construction and operations. Litigation and prosecution at the state level are likely to result. Additionally, other local companies have opened dialogues with these groups.

For general policy development, Zero Population Growth looked at the general impact of higher density habitation. U.S. Public Interest Research Group considered and projected the overall volume of toxic releases in particular industries, including chemicals not included in the TRI. The National Association of Manufacturers is targeting companies who have major releases in order to promote the development of policy alternatives and remedial programs.

In the political arena, initiatives are occurring at all levels. One good example is occurring in Maine. The Maine Natural Resources Council is tracking corporate emitters as part of the Industrial Toxics Project to reduce emissions. They are working directly with companies to voluntarily reduce the emissions of 17 priority chemicals. Finally, a commercial group advising on socially responsible investment is using the TRI data as a factor in ranking the social benefits of specific companies.

In conclusion, RTK NET, and the use of TRI data, should stand as an example of the leverage that is possible by opening direct channel to government data. The us of on-line technology can make this fast, inexpensive, and easy. Government programs should include these mechanisms as a specific tool to advance programmatic needs.

Mr. Wise. Mr. Bass.

STATEMENT OF GARY BASS, EXECUTIVE DIRECTOR, OMB WATCH, WASHINGTON, DC

Mr. Bass. Thank you, Mr. Chairman. I think John's summary of our right-to-know computer network is quite compelling. It reminds me that RTK NET sort of serves as a bridge to a land that many of us haven't visited. Most of us really didn't have a sense of what was on the other side until the bridge had been built.

As someone who is not a "techie" and doesn't really understand a lot of the technical language behind much of the demonstrations we've seen today, I'd like to share a couple of really important points.

First of all, as John just told us, RTK NET shows very clearly that there are different types of users and that whatever systems we set up really need to respond to a variety of levels from the novice like I may be to a very sophisticated computer literate individual like many of the earlier witnesses.

Second, we have discovered, by doing RTK NET, that one set of data alone is very meaningful but becomes far more meaningful when we can link it with other, if not disparate, then related information. It becomes much more powerful, and the electronic age allows us to do much of that.

Third, a heck of a lot of training needs to be done with any of these kinds of things, whether it's CD-ROM or the interpretation of the data or whether it's an online system like John has been describing.

The last preliminary point that I want to make, in terms of the summary that I just heard, is that there are different strokes for different folks; and that is, CD-ROM is probably the appropriate technology in some cases, online services are probably the appropriate technology in other cases.

I don't think there is a "right" technology yet. I think that as you want to manipulate large amounts of data, and if data is quickly changing, you want an online service. If it's archival information, in the nature of the first demonstration we saw today, it's excellent to have it on CD-ROM where you can have it locally and use it. So different strokes for different folks.

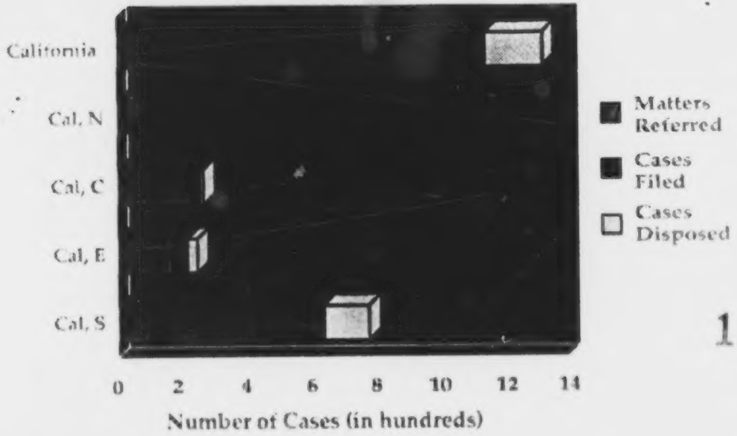
Now let me turn to the broader lessons I've learned for policy purposes. I've learned many a time that I should never have more than five points, because then I can't slam one fist on the table while ticking off the points with the other. So I'll keep it to five quick points.

First is that there is already an enormous and growing demand for public access to government information. The TRI experience that we've described is only one piece of that pie. We're getting a good sense that people really do want to get information.

A major hurdle is technology, as we've been talking about. Although technology is overwhelming to some, I must note that in 1981 roughly about 17 percent of public schools had microcomputers. You take a look at data for 1989, and 97 percent have microcomputers.

(SLIDE 20)

Criminal Matters for California
1981-1990



And if you also take a look at a 4-year period between 1984 and 1989, how many of those educational facilities do you think had computer communication linkages? You will see a fourfold increase jumping all the way from 7 percent to 28 percent.

The point is that the technology is becoming easier to use. There are hurdles, but they're becoming less obvious, and there's greater demand as that happens. I think as those demands increase, we have to target in on who are really the audiences we want to reach, especially initially.

It's very hard to go to the layperson or the person at home in many cases. RTK NET has taught us that we want to really reach what we are calling intermediary groups, groups who also reach out to broader audiences themselves, whether they be the nonprofit community or whether they be the media. But these are groups who have additional reach to the public.

I also think that there's growing pressure on Congress to respond to this right-to-know movement, which calls for allowing access to government information. I'm reminded that in the other body of Congress, Senator Kohl has introduced a bill, and a bill has also been introduced in the House by Representative Sawyer for a student counseling and assistance network which would take the models of the right-to-know network, RTK NET, and apply it to access to student financial aid so that we could promote equal educational opportunity in its greatest possible way.

The notion of Government making the Federal Register online or a Congressional Record online is also growing. These documents are government bibles, if you will, and yet we don't have, many times, direct access or a way of manipulating information to find what we need.

This subcommittee and the full committee worked last year very effectively on developing a bill for EPA to make it a cabinet level agency. One section provided affirmative on public access, and provided an excellent model for agencies. I should note that the administration did not oppose that section of the bill. They were actually quite supportive of that provision.

So I think there are growing pressures. One could even envision where we could go with that public demand. Maybe the time will come where Governor Sununu may purchase his stamps through electronic conferencing instead of using government paid limousines.

The notion of using electronic means offers up a number of possibilities that we probably haven't even thought of yet. And I also should mention that there are many pressures working in the opposite direction, opposing right to know. We have to fight those initiatives.

There is one even pending in this House right now dealing with the Community Reinvestment Act, which would, in essence, move the right to know in the wrong direction by excluding about 80 percent of banks from its requirements. So I would say that there is an enormous, enormous demand for public access, but powerful pressures to oppose it.

The second point is that the cost is not that great. I talked to a lot of people in Congress and they think, "Oh, my god, we're going to spend millions for public access." I just don't think that's true.

The RTK NET experiment showed that it was a relatively low cost endeavor, and if we start to build public access as part of the information resources management principles, the planning concepts within the agencies, then public access, if seen as part of that planning cycle, really becomes an incremental cost. It's really not a significant expense.

So I think that's important. And by the way, I think OMB can play a helpful role here, particularly with its Circular A-130 that you mentioned earlier. They certainly could play a very important role in helping to push agencies in the direction of that kind of comprehensive planning. I must add that fees are important to users. John mentioned that it was free for people to use RTK NET. I think government has an important responsibility of keeping cost as low as possible. People in your own congressional district, from a rural area, often don't have the resources but may want the kind of information that's important to them. You've got to keep costs very low.

I'm reminded of your example at the beginning of the hearing about the CD-ROM that's so expensive. I would add to your list that I went to purchase a directory of congressional members, because I want to know who you all are, and it's $59 on paper. To buy it on a diskette, which should be cheaper, especially since you don't have to print it, was $299.

Mr. **Wise**. You have to pay for quality. What can I say.

Mr. **Bass**. But it didn't have your picture. The third point that I want to make—and I'll keep pounding with this hand. Public access will definitely create greater data quality, and it will increase new kinds of usage.

I've heard a number of agencies say, "Geez, we can't go through public access. Our data isn't good enough." That's precisely the wrong kind of shield or the excuse to use. We have got to encourage public access, and the TRI experience really shows as the public uses it, the government, as well as those giving the information to the government, become far more responsible and accurate in the information they provide.

That is absolutely essential. I should add that the TRI experience also showed that the public, the lay public, are responsible managers. They know how to use the information in the right arena, and they know how to get expert consultation when the information is too overwhelming.

The fourth point I want to make is that agencies are going to have to undergo a cultural change, if you will. It may be painful, but that cultural change has to include the involvement or the principled notion of public access.

EPA is a great example. When the 1986 community right to know law passed, I would say EPA, frankly, went into this whole experience kicking and screaming. They were mandated by Congress to make this information available through computer telecommunications and did not eagerly embrace the mandate..

But now, after several years, I would say they are major advocates for public access. The EPA staff that have been doing the TRI are now the ones actually moving to other parts of EPA and encouraging public access. And the realization is that it's going to make government more efficient, and it's going to get greater public involvement in the decisionmaking process.

I must add, as an aside here, my own point of view is it really doesn't matter who provides the information, it's how the public gets it, gets it in the least cost, and in the easiest format for use. I think government has a primary role in doing that, but it doesn't obviate the role of the private sector.

The last point I want to make, and it's probably the most important point of the five, and that is data linkage is critical. We need to build an information infrastructure in government. It doesn't exist. We need Congress to take the lead, and we need OMB to take the lead. There are roles for everyone.

For example, Congress could expand this TRI law to include Federal facilities or to include the standard industrial classification codes beyond the manufacturing sector. OMB could play a very critical role by really getting the Federal information locator system underway, which was mandated 10 years ago.

That locator system would really be a backbone for the public, for you and me and all of us to find what information even exists in our government, and where it is.

And agencies have a responsibility. EPA is taking a fine lead in developing a facility identification or facility index system, FINDS. That system helps provide a kind of crosswalk so we could find information from one part of the agency to another part of the agency. We've shown on RTK NET the potential use of FINDS by linking two disparate regulatory data bases. Even the EPA regulatory offices are amazed at the possibility. The possible realm of where it could go isn't just simply public access, it's also how agencies can improve its management and its regulatory enforcement.

The day is also coming where we can take the JEdI principles using CD-ROM and the online information that John was talking about with the TRI, bring them together so we can develop really nice maps. That way we can see when West Virginia becomes beach front property or the extent of pollutants spreading through the air. The EPA has already got a CD-ROM like that.

So all in all, I think where we're at today is a situation where we have new technology. We're lacking the infrastructure to really make great use of public access. The challenge is in front of us, and I think your concept of hearings here is absolutely critical.

We are so bogged down in the jargon of public access, whether it be cyberspace or bandwidths, or whatever, we often lose sight of the bottom line: How do we get public information, and how do we get it in a way that's cheap and makes sense for what we need? So I congratulate you on having this hearing.

[The prepared statement of Mr. Bass follows:]

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Statement of

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Executive Director
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Before the
Government Information, Justice and Agriculture Subcommittee
of the
Committee on Government Operations

On
Creative Uses of Government Data
June 19, 1991

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Good morning. My name is Gary Bass and I am the Executive Director of OMB Watch, a nonprofit research, educational and advocacy organization that monitors Executive Branch activities that affect nonprofit, public interest, and community groups. Though we focus on the White House Office of Management and Budget (OMB), we also work to encourage broad public participation in government decision-making and to promote a more open and accountable federal government.

An undergirding principle for OMB Watch, therefore, is that the public has a right to know about government initiatives, including the right to know about and use public information collected by the government. In the electronic age real access requires eliminating barriers of cost and complexity.

My testimony today will cover two main areas concerning electronic public access:

- OMB Watch's practical experience with the dissemination of government information through an online experimental project called RTK NET (Right-to-Know Computer Network); and
- Policy implications drawn from this experience.

RTK NET represents a good example of creative uses of government information and is unique in several ways:

- It is innovative in its funding sources, being a joint effort of private foundations and the government;
- It employs commonly available – and relatively inexpensive – equipment and software put together in a manner that goes beyond what other services traditionally offer;
- It offers data analytic capabilities for the lay person who may not be fully computer literate; and
- It suggests developments for how government should begin to link or integrate information resources.

PRACTICAL EXPERIENCE: RTK NET

OMB Watch, in cooperation with Unison Institute, operates RTK NET, a computer network that allows anyone with a computer and a modem to access information about toxic chemical releases collected by the EPA.

With support from the EPA as well as a number of private foundations, such as the Bauman Foundation, Joyce Foundation, Charles Stewart Mott Foundation, George Gund Foundation, James C. Penney Foundation, and the Beldon Fund, the RTK NET Pilot Project was started last Thanksgiving. The two-year Pilot was established to explore creative mechanisms for distribution and linkage of government information, starting with the EPA's Toxics Release Inventory (TRI).

TRI was created by the Superfund Amendments and Reauthorization Act, which was passed in 1986. Under this Act, every manufacturer that uses a certain quantity of more than 300 chemicals that endanger health and the environment must report each release of those chemicals to the land, air, and water, as well as transfers of the chemicals to other sites. The EPA now has records of these emissions and transfers for 1987, 1988 and 1989, from approximately 20,000 factories. The legislation that provides for the TRI, also requires the government to make the information available to the public.

As this Subcommittee knows from other hearings, the EPA contracted with the National Library of Medicine to provide the mandated online access to the data. At the same time – and much less known – EPA made the data available to the public for purchase. Several environmental, press, and other organizations bought the data tapes for preparation of reports and stories on toxic releases.

OMB Watch also obtained the TRI data and proceeded to make it available on RTK

NET. Under the Pilot, RTK NET provides four services:

- **Database Access.** Alternative methods for people with differing levels of computer skills to search databases which link previously disparate sources of information (such as the TRI with water permit data and health data);
- **Electronic Mail.** Participants can communicate with one another (either singly or in groups) through computer generated mail. High security levels are maintained to assure confidentiality and security;
- **Electronic Conferencing.** Computer conferences are being tried with different management approaches to test out what works. The electronic conference allows debates and discussions to develop without the cost of travel or scheduling times when everyone can be at a phone; and
- **Access to news and information.** Information from major newspapers, newsletters, trade publications, and important reports are put on the system daily, along with action alerts about toxics issues. These might include responses to federal legislation or regulations, court cases, or state actions.

How Has RTK NET Been Put to Use

Armed with knowledge, citizens can take an active role in shaping their environment. Citizens sue companies to enforce environmental regulations that are not being followed. Citizens negotiate good neighbor agreements with industry to set targets for reducing pollution. Citizens also become actively involved in figuring out strategies to achieve pollution prevention. One of the users of RTK NET successfully pressed for the creation and funding of a government program that now provides inspection and technical assistance to manufacturers in Kentucky. Citizens, workers, as well as industry, can use the information collected by the EPA to get a sense of how industry could improve its production processes. In these situations, citizens and workers become involved in setting priorities for the environment in which they live.

Participants use information they gather from RTK NET in a variety of ways:

As a grounds for negotiating with industry

- A user in Illinois has been invited to participate in a local corporate Chemical Accident and Emergency Response task force based on media coverage of information he gathered from RTK NET.

As a way of monitoring toxics use reduction

- An environmental activist in Maine is tracking current emissions from the metals industry to compare with future emissions to ensure that the industry complies with recently enacted Toxics Use Reduction legislation.

- A participant in Texas has focused on a specific manufacturer's toxic emissions and established goals for reductions, which he hopes to negotiate with plant managers.

As a way to influence program and policy development

- A nationally-based public interest group used RTK NET to help prepare a report on additional hazards shown by TRI releases.
- Two organizations used RTK NET information to further their own agendas in such areas as population and growth issues and responsible investment strategies.
- A coalition cross-checked TRI data for a report that identified gaps in the TRI right-to-know law and described necessary improvements.

As a way to facilitate communication among activists

- A network of activists in Illinois passes drafts of proposals and other documents through RTK NET's E-mail system.
- An activist in Virginia has received information about pursuing citizen suits against TRI violators by posting a query on RTK NET.

As a basis for presenting information to the press

- A community organizer in Massachusetts has coupled information from RTK NET with health data for eight surrounding towns and received coverage in local newspapers.

As an educational tool

- An environmentalist in Pennsylvania has used health information about specific chemicals to inform other environmentalists about the impact of local emissions.
- A firefighter in Maine uses similar information in his emergency response classes for other firefighters and industrial workers.
- Faculty members teaching in New York, Pennsylvania, Virginia, and California are using RTK NET for classes on environmental issues, and one graduate student has used the service to help prepare a thesis.

Some very specific ways in which people are using RTK NET are described in Attachment A which is a copy of a page from our Summer, 1991 RTK NET newsletter, called *On-line*.

We have found that once citizens become exposed to the TRI data, they want to know more. Many RTK NET participants call to ask that we distribute more types of information. For example, they want to know what impact the releases have on health and the environment. They want to know how products can be made in a more environmentally friendly way. They want to know how to reduce overall emissions. They also want to know how other citizens interpret the information available on RTK NET. This involvement and curiosity is an important step toward producing an informed citizenry. Sadly, we can't provide all this information, because the government isn't collecting or disseminating the information. But government could certainly share more than it is now.

Once informed, citizens can contribute to public policy debates. Access to information has opened the door for citizens to discuss toxic chemical use and regulation with industry and government. One of our participants has developed a survey on pollution prevention as the first step in discussions with companies in Illinois. Because he already knows the volume of chemical releases from the company, he is prepared to make specific recommendations.

Access to the data has also provided insight as to how the law can be improved. Users have discovered that important industries and chemicals are not covered by the TRI. Mining and federal facilities, for example, do not have to report their releases of toxic chemicals. And not all ozone depleters are listed under the TRI as toxic chemicals. Pilot participants, along with others who have used the TRI data, have begun discussing how to expand the right-to-know law.

RTK NET users, who are becoming increasingly familiar with computer access to data, also helped in debating and shaping EPA's implementation of a law passed at the end of the last Congress, the Pollution Prevention Act. The outcome of that debate is yet to be concluded as OMB has not reviewed the EPA proposed information collection request. But public input was welcomed at EPA and has greatly influenced its decisions on the types of data to collect.

Making RTK NET Responsive to Different Types of Users

RTK NET offers different types of information on the system – some text-based and some numerical. Beyond a number of newsletters and other documents, we have on the system (or are preparing to load):

- 1987, 1988, and 1989 TRI data;
- New Jersey Health Fact Sheets;
- Permit Compliance System, which provides information about water permits;
- Information on state right-to-know laws and regulations;
- EPA's Facility Identification Number System, which serves as a crosswalk to track facility compliance under different regulatory programs; and
- Commonly used environmental bulletin board systems.

With additional resources, we hope to obtain selected health data, Census TIGRE files, and data from the Survey on Income and Program Participation. We also hope to experiment with using the RTK NET data in developing locally based mapping services.

RTK NET users have computer skills ranging from novice to expert, and from neophyte to pro with regard to use of online systems. The same broad range of skills exists when it comes to interpretation of the data. Thus, RTK NET had to be structured in a way that could respond to the different levels of expertise – particularly because of the complexity of the data. I have attached a more complete review of the different search strategies available to RTK NET users (see Attachment B).

One strength of RTK NET is its ability to provide different ways of accessing the same data. As an individual's computer skills increase so does the opportunity to conduct complex searches. On RTK NET, however, the novice user is not ignored. We have developed "canned" programs to allow users failsafe means of getting the information they need. And we have shown users that we put to use their feedback on how to make the system more "user friendly."

Access to text-based information is also handled different for different types of users. Someone may type a word or set of words and RTK NET will display a list of documents containing that word (or words). The user may move to the document he or she wants to read or may scroll through them all. Alternatively, the user can request to display only unread documents or only those from a certain time period. Finally, for those more hierarchically oriented, they can look up documents in various parts of a topical outline.

Who Uses RTK NET?

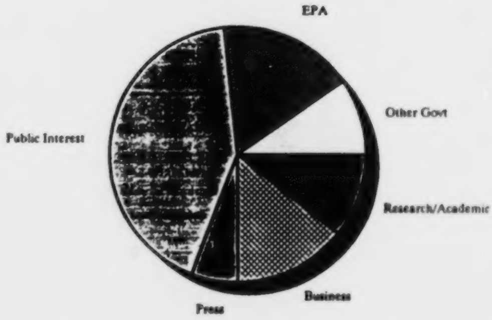
It has been said that primarily researchers and lawyers use environmental information collected by the Federal government. While a fair number of lawyers and researchers do use RTK NET, they are not the only audience. Citizen activists use the information on RTK NET for community organizing, the media use the information to develop and verify stories, workers use the information to find out about the chemicals to which they have been exposed, and firefighters use the information to prepare themselves to respond to fires at manufacturing facilities.

The image of use primarily by researchers and lawyers may be grounded in the fact that they have the resources to pay for access to the data, including the proper equipment and trained personnel. RTK NET is an attempt to level the playing field. Therefore, considerable energy has been devoted to training people to use RTK NET and other online systems – to get over their fears of using computer telecommunications.

We have more than 250 participants; roughly half are public interest organizations, a quarter are government, and the remainder are a combination of business, press, and academic/research facilities (see chart on next page). About half of the users live in one of three locations we have chosen to give special attention – the Northeast, the Great Lakes, and the Gulf Coast; the remainder are distributed around the country.

The number of participants is quite surprising for two reasons. First, we did not advertise RTK NET services. Second, we had planned to limit the Pilot to 200 applicants throughout the two-year period. We have been surprised at the extensive and intensive interest in RTK NET of national, state, and community groups. Now we are looking at

Types of RTK NET Users
May 1991



various options for making RTK NET more widely available.

Public interest groups have been the most active on RTK NET, and government employees have been the least active. The lack of participation by government employees, EPA in particular, may have something to say about the priorities of public access for agencies that are involved in regulatory enforcement. As one EPA employee told us, "I'm too busy doing my job to use the data or discuss it with others on RTK NET." This person's job was to deal with the TRI data.

POLICY LESSONS LEARNED FROM RTK NET

The RTK NET experiment has demonstrated the social benefit derived from access to toxics information and the eagerness of the public to use such data. It has also shown that there are different types of publics, with differing needs and levels of skill. Our online telecommunications experiment has focused on groups that might serve as an intermediary to broader segments of the public, primarily because of the cost and complexities of newer technologies make it difficult for individuals and lower income organizations to use computer telecommunications. In using toxics data available through RTK NET, our pilot participants have helped to promote improved data quality and voluntary toxics use reduction efforts.

Strong feedback from all kinds of users – including EPA itself – makes it clear that one set of data standing alone, no matter how interesting is not nearly as beneficial as the combination of disparate yet related data sets. Environmental problems, as well as other social issues, are inherently multidimensional; computer technology allows these dimensions to be arrayed together. For example, we linked the toxics data on RTK NET with health information. Now users are requesting that we link such data with other environmental and health information, as well as census data.

There are many lessons that the government can learn from the RTK NET experiment. As the Pilot continues, we inevitably will learn many more things. For now, though, I would like to address five of these lessons:

1 **There is enormous demand for access to government information from state and community groups.** As described above, participation in RTK NET exceeded expectations. The hurdle is the complexity of using modems and sophisticated equipment, such as CD-ROM players. But as prices decline and technology advances, more and more people are becoming familiar with electronic access. The rise of computers in schools and the sale of commercial online services, such as Prodigy, are making electronic access increasingly wanted by the public and feasible for government agencies.

At issue will be how federal agencies provide the information to the public. User participation in the design and evolution is essential. While not every citizen will want electronic access, "intermediary" groups will. These groups, often nonprofit organizations and press, distribute information to wider audiences. This is a core constituency that must have its public access needs served and are beginning to demand it.

For example, the RTK NET experiences stimulated Senator Herb Kohl to introduce the Student Counseling and Assistance Network Act to provide information about postsecondary financial assistance and guidance counseling programs that improve chances of participation in postsecondary educational opportunities. The bill would have the Education Department provide a computer service like RTK NET for guidance counselors, professionals involved in working with students, parents, and students. Fee waivers would be provided for those without the resources to pay for the services.

Last year the House passed a bill to make the EPA a cabinet-level agency. In the bill was a section on public access, which this Subcommittee worked on. The section would call for improved data integration and linkage, and further experiments like you have heard testimony about today with computer telecommunications and CD-ROMs. Interestingly enough, the Administration had no problems with that section of the bill.

The message is clear: the public wants access to government information. Congress and the Administration are beginning to get the message.

2 **The cost of public access is not very great, especially if considered a component of managing information.** In talking with agencies and congressional committees there is an assumption that public access is a major government expense, costing millions each year. This is simply not true, especially if amortized over time. The entire RTK NET experience since 1988 has cost less than $400,000, including the purchase of hardware, development of software, training materials and conferences, and maintenance of the system. The cost of adding more information or users is negligible; it was the design and training that was expensive.

System design costs could be greatly reduced if public access were seen as part of the information lifecycle for agency planning purposes and if it were spread over time. Once information is collected and organized, public access is a minor incremental cost. The big cost is in processing the data and improving its quality. Hopefully, OMB's Circular A-130, the Management of Federal Information Resources, will encourage agencies to plan for public access when conducting their five-year system plans.

As electronic public access becomes more common, Congress may need to consider alternative ways of funding information activities since there are likely to be larger one-time cost allocations for equipment and software. This could be particularly problematic if the concept of spending caps as passed in the Budget Enforcement Act are kept in place. It also raises concerns about whether Congress will allow user fees from information services to be considered as a way to pay for the dissemination of the information or whether OMB will allow it to be counted as a means for offsetting lowering taxes, such as the luxury tax on boats, under pay-as-you-go requirements.

3 **Public access will improve the quality of government data and create new opportunities for improving social and economic conditions.** Public input through RTK NET and other means has stimulated EPA and industry to improve the quality of the TRI data. As public access becomes more common, there will be greater emphasis to improve the quality of other databases.

Some have argued that public access should be limited because the quality of the data is suspect. If true, this is all the more reason to promote public access. It will put pressure on government and providers of the information to insure accuracy. For example, with respect to the TRI data, industry has made an effort to improve the quality of data reported, particularly as it begins to use such data in public relation efforts.

The fear is that data quality becomes a weak shield fending off public access. This an unacceptable excuse for not providing public access.

As the quality of government data improves, so does its applications – including giving decision-makers more useful information on which to base policy decisions. The TRI experience has taught us that citizens can "responsibly manage" the use of complex data. Most users of TRI have become more educated about toxic releases in their communities and have consulted experts for detailed explanations of the data. In this way, citizens are able to get more involved in government decision-making and play a more responsible role in society.

4 **Federal agencies need to undergo a cultural change – which may seem painful at first – that places new priorities on public access.** The Bauman Foundation convened a meeting in Annapolis, Maryland roughly one year ago to explore lessons learned from EPA's TRI experience. One of the striking findings was the conversion EPA staff went through in carrying out the TRI law. In one sense, EPA grudgingly took on their responsibilities to provide public access; but after time became convinced that public access would help them be more effective in their jobs. These EPA staff have become forceful advocates within EPA on the merits of public access, trying to convice other program offices of the importance of making data publicly available.

This change – a cultural change, if you will – may be difficult at first, but will, in the end, increase government efficiency and improve social conditions. Agencies will need to address such issues as What is the mission of the agency? Regulatory agencies, for examples, have never seen their role as providing information to the public. Most agencies are not skilled in the management of information resources and will neeed assistance in refining methods for doing so.

The issue is not just public access, but improved management of information resources. When information resources management is strengthened, dissemination to the public falls into place. When public access is an after-thought, it is harder and costlier.

This cultural change is beginning to occur. We have been talking with different agencies about making *Federal Register* notices available online. Some agencies within EPA are talking about putting on RTK NET documents that are commonly requested under the Freedom of Information Act and routinely made available. And community groups have begun to press federal agencies for their right-to-know about data in areas as diverse as health and banking.

5 **Data linkage is essential and requires an improved governmentwide infrastructure to achieve it.** The electronic age makes data linkage a more realistic prospect than say a decade ago. Still, federal agencies have not taken planned steps to make databases cross-referenced and linked. Congress had a vision for the first step of this endeavor – and that was a locator system to find out what information resources exist and how to obtain them. Mandated a decade ago under the Paperwork Reduction Act, the Federal Information Locator System (FILS) has never truly been implemented by OMB. This must be done as a first step in building the infrastructure that will promote meaningful public access.

At the same time, agencies need to develop data integration and linkage projects. EPA's development of a Facility Index Data System (FINDS) is a beginning model for showing how a FILS-like structure could be used as the backbone for data linkage. FINDS provides two types of information on facilities: (a) facility characteristics data; and (b) references to program databases with information about a particular facility. Assigning a FINDS number is still in the early stages at EPA, but the response from program offices has not been overwhelmingly supportive. Many program offices do not see the advantage of developing a facility index.

Taking FINDS the next step under RTK NET may assuage the program offices' concerns. RTK NET users can look at information from the TRI database and, using the FINDS crosswalk, see it linked to another regulatory database. In this way, the public can see if the TRI releases exceed permissable limits or if the company has permits for certain toxic chemicals but no reported releases. For the program offices this offers a faster, more expedient type of regulatory enforcement – and is something that has never been available before.

There is also a role for OMB in this data linkage endeavor. OMB is needed to stimulate agencies and to help set common standards for data integration and linkage. This kind of affirmative role for OMB would be a major asset in developing a governmentwide public access infrastructure.

I would like to make one final comment about information policy discussions. They tend to be dominated by Washington insiders and are imbued with enormous jargon: bandwidths, fiber optics, dissemination vs. access, marginal cost vs. average cost, bytes and baud rates, Cyberspace, and on and on. We often lose sight of the real users – the different publics that need and want to use government information.

For those of us not technically adept or familiar with this new information language, the bottom line is can we get the information in a manner that is useful to us? It doesn't help to find out that you can buy a data tape through the National Technical Information Service if you do not have the resources to purchase the data or the equipment or the know-how to extract the data you need. While the Depository Library Program should be supported, it alone is not the solution. Access to libraries is not always easy, nor are librarians always familiar with searching various databases. Many libraries lack the capital and technical resources to fully participate in the electronic age.

The time has come when the government has to step up to the plate and hit a home run on public access. This means the government has to take aggressive steps in developing mechanisms to assist the public in:

- Finding out what information in government even exists;
- Identifying how it can be obtained; and
- Keeping costs low enough not to be prohibitive to anyone.

The information policy debate needs to broaden beyond the "insiders" to include real community-based users.

That is why this hearing today is so important. It is one of the few times that the information policy debate has been grounded in users' needs. I commend you for your effort and thank you for the opportunity to participate.

Attachement A

PUTTING RTK NET TO WORK

Participants in the RTK NET pilot project live in almost every state in the country. They use data from the network in many ways. Below are some ways people use RTK NET.

Researching Interstate Waste

The arrival of a trainload of hazardous waste prompted Bob Pruitt to search for records of other out-of-state wastes coming to Utah. Pruitt co-chairs the Utah Steering Committee of the Land and Water Fund of the Rockies, which provides legal assistance to environmental groups. He says that the nearby US Pollution Control Inc. (USPCI) landfill receives many train and truck loads filled with out-of-state wastes. Why? "The facility is in a relatively remote location in the desert, with no neighbors for miles around . . . so protesters are rare." If you'd like to learn more about searching for off-site transfers or to find out what Pruitt discovered about Utah, contact "pruittr" on RTK NET.

Monitoring Toxics Use Reduction

Several months ago, Peter Washburn and Matt Samuelson of the Maine Natural Resources Council (MNRC) decided to record factory emissions in their state over a five-year period. With this record they plan to track corporate progress at reducing emissions covered by the Industrial Toxics Project. This Project was recently initiated by the EPA and relies on companies to voluntarily reduce emissions of 17 chemicals. If you'd like more information about MNRC's projects, or to find out about the results of this search, write to Matt Samuelson at "washburn" on RTK NET.

DEAR RTK NET,

I am a firefighter in Portland, Maine, population approximately 70,000. I am on the safety committee. Hazardous material response is one of the committee's concerns. So, the information that I have been able to acquire from the RTK network has been helpful.

I am also involved in a training course for hazardous material response for other firefighters and industrial personnel in the state of Maine. By using the network I am able to look up some of the chemicals that they may be exposed to in their town or plant, which makes it more interesting for them and myself. We are also very active in toxic use reduction (TUR) and, again, information from RTK NET has been helpful.

What have I done with this? I can do an Easy Form R Report. I have been able to use the Regular Form R. You can download this information into Lotus 1-2-3 files or, in my case, Quattro files.

I have certainly learned a lot about the paper mills in Maine. They're chemical plants. I have a Scott Paper mill less than a mile from my house here in Westbrook, ME. You should look up the chemicals they're using! I have. We also have plating plants and a few other goodies that I found out about through RTK NET.

Sincerely,
Tom Valente, valentet

Spotting Trends in Emissions

Bill Pease is writing his dissertation at the University of California, Berkeley. His work focuses on the effectiveness of the TRI as a tool for reducing pollution. He recently searched RTK NET for information on emissions from and treatment methods used at 60 California factories that cause a cancer risk of 1 in 1,000 in nearby communities. Preliminary results show that some factories have reduced their emissions of ethylene oxide, one of the worst cancer-causing chemicals. Pease says that this reduction can be attributed to a number of factors, including a lawsuit based on information from the TRI. For more information on the design or results of the search, contact Bill Pease at "peasew" on RTK NET.

Ranking Products Environmentally

Bill McIlwain works at Green Seal, a new organization that is developing an environmental labeling program. Recently they decided to rank tissue paper products, so they wanted to get a sense of toxics associated with paper production. Using a list of tissue manufacturers, McIlwain searched RTK NET to estimate pollution from individual factories. As the project progresses, this data will be combined with other environmental indicators. For more information on Green Seal or the results of the tissue paper search, contact Bill McIlwain at "mcilwain" on RTK NET.

Other Ways of Using RTK NET

- You can start a conference. For example, an RTK NET conference for enironmental activists focuses on strategic use of toxics data.
- You can use TRI data from RTK NET searches as:
  - Grounds for negotiating with industry;
  - A way to influence program and policy development; and
  - A basis for presenting information to the press.

Let us know how you are using the network. Send a message to "macleana" on RTK NET.

NEED HELP DOING SEARCHES?

Rich Puchalsky, RTK NET Research Coordinator, will help search for information if the search is a particularly difficult one. If you would like him to do a search for you, plan ahead. Turn-around time for these searches is usually a week. Be sure that you define not only the information that you would like, but also how you would like it to look.

Call (202) 234-8494 to reach Rich or drop a note to "puchalsk".

Attachment B
Different Search Strategies on RTK NET

We set up different approaches to accessing the TRI data, with differing levels of complexity. Under the simplest approach, users can see information about toxic releases using what we call Standard Reports. In these Standard Reports, users are prompted to enter the year, location and chemical for which they would like to receive information. So, a user might, for example, want to find out about lead emissions in West Virginia for 1989. After entering this information, the user would receive a listing of the factories, their addresses, volume and kind of all releases that fit these criteria.

The report produced for West Virginia is on the next page.

These Standard Reports are widely used by novices for basic information about toxic releases. At users' request, we established a mechanism where people can read about the health effects of a toxic chemicals and then transfer to a Standard Report so that you can find out how much of the chemical has been released in your congressional district, zip code, or state.

We are now developing other Standard Reports that prompt the user for different types of information that are commonly asked by users. For example, many users want a facility-based Standard Report so that the user might be prompted for year, name of facility, and chemical. Different information about a specific facility would be displayed, such as what chemicals were released or how much of certain chemicals went into the air, water, and land.

At the next level of searching is an analog of the government-produced form used to collect TRI information, called Form R. Form R Searching allows users to fill in the blanks on the form for the type of information they want. Using Informix software, RTK NET conducts the search and provides detailed information about each submission sent to EPA that matches the search criteria, including detailed information about releases, production processes, treatment handling, and more. Thus, a user could search, for example, on all toxic TRI chemicals being shipped to a particular state such as California. Each submission (with seven screens for each one) would be displayed.

For those wishing to develop even more complex searches, we have a "point and shoot" option, called Easy Report Writer, based on software called Intelligent Query. This module allows users to create custom reports of the TRI data. You can display simple reports from data you select, or you can format and print customized reports to meet your display requirements. Everything is done by moving your cursor to the choice you want and pressing RETURN to accept it. For example, if you wanted to search for lead in West Virginia, you would move the cursor to the variable named, Chemical Name, and press RETURN. A window would pop up, asking you if you want your choice to be "equal to", "greater than", or other options. After selecting the option you want, another window may pop up giving you choices for greater definition. After this, you would then be asked for the chemical name and would type LEAD. You will be given other options, whether you want to continue and

LEAD In West Virginia 1988

Control#: 1388025755354WV
Facility: STERLING PLUMING GROUP INC.
Contact: JOHN N. CHRISTODOULOU
Address: BOX 798
MORGANTOWN, WV 26505
Chemical: 007439921 LEAD
Released: 29,900 pounds (est.)

Year: 1988
TRI ID: 26505STRLNROUTE
Phone: (304) 292-6391
County: MONONGALIA
Max.onsite: 05 *

Control#: 1388025710094WV
Facility: SHEIDOW BRONZE CORP.
Contact: THOMAS L. HARRIMAN
Address: SISLER ST.
KINGWOOD, WV 26537
Chemical: 007439921 LEAD
Released: 2,045 pounds (est.)

Year: 1988
TRI ID: 26537SHDWBSISLE
Phone: (304) 329-1105
County: PRESTON
Max.onsite: 03 *

Control#: 1388025651516WV
Facility: SIGNODE SUPPLY CORP.
Contact: BILL LIPPERT
Address: 3015 BIRCH DR.
WEIRTON, WV 26062
Chemical: 007439921 LEAD
Released: 570 pounds (est.)

Year: 1988
TRI ID: 26062SGNDS3015B
Phone: (304) 748-4800
County: BROOKE
Max.onsite: 05 *

Control#: 1388025870282WV
Facility: FOLLANSBEE STEEL TERNE DIV.
Contact: JAMES R. SIMS
Address: 1 STATE ST.
FOLLANSBEE, WV 26037
Chemical: 007439921 LEAD
Released: 500 pounds (est.)

Year: 1988
TRI ID: 26037FLLNS1STAT
Phone: (304) 527-1260
County: BROOKE
Max.onsite: 05 *

Control#: 1388025069966WV
Facility: GE CHEMICALS INC
Contact: KAREN NELSON
Address: STATE RTE. 892
WASHINGTON, WV 26181
Chemical: 007439921 LEAD
Released: 457 pounds (est.)

Year: 1988
TRI ID: 26181BRGWRSTATE
Phone: (304) 424-5697
County: WOOD
Max.onsite: 04 *

No. of facilities: 5
Total released: 33,472 pounds (est.)

*1 = 1 + 2 = 100 + 3 = 1K + 4 = 10K + 5 = 100K + 6 = 1M + 7 = 10M + 8 = 50M + 9 = 100M + 10 = .5B + 11 = 1B +

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if so whether the next choice will be an "and" or "or" option. After selecting "and", you would repeat the process with the next variable, STATE.

You may do mathematical calculations (e.g., give the total of all air releases, or the subtotal of releases by county), choose layout options, and much more. Searches can be saved and shared with others so that they would only have to edit the location or another variable to make the search useful to their needs. This gives the analyst enormous flexibility to do sophisticated searches without being computer literate. And for those who are computer literate, search statements are built as you make selections and are printed on the screen so that you can learn the search language. (At any time, you may edit your search directly without using the point and shoot method.)

On the more complicated end of the scale, a user could access data on RTK NET using Structured Query Language (SQL). In this computer language, users can specify what kind of information they would like, such as compare air emissions in West Virginia for 1987, 1988 and 1989, and then compare that finding with Pennsylvania's air emissions over the same time period. Like the Easy Report Writer, the user can specify what kind of information the computer retrieves, such as the contact name of the person who filled out the original EPA form, and how they would like it to look when printed out.

We chose SQL because this is the general direction of the computer industry. Most programs are written to be compatible with SQL; additionally the government is moving in the direction of use of SQL.

Mr. Wise. I was interested to see that the EPA constitutes the second largest group of RTK NET users. Why would this be? Can't the EPA meet its own needs for TRI data?

Mr. Chelen. Maybe I can respond to that. EPA does provide its services through the mainframe, and many of the EPA employees do have accounts and can get to it, although the requirements of it, the knowledge, the technical skills you must have are fairly quite high and quite rigorous.

EPA's staff are also looking for other alternatives. There are many tools that are available, for example, on RTK NET, that are close to what a person sees on their PC. It's a much different world than what you see on the mainframe.

So they're interested in the technology to be developed, that these things be available throughout the agency in general. I think also there's an interest in being part of this mixture of government, public interest, and industry, and for the activities that might occur.

Mr. Wise. TRI data is available online from the government. Why don't you simply rely on the Federal system? Why have you created RTK NET? Doesn't the Federal system supply everything you need?

Mr. Bass. I think it comes back to that RTK NET is part of that different strokes for different folks. The EPA contracted with the National Library of Medicine to put up this TRI data. They did a fine job, however, it's designed primarily for people who are far more computer literate than other user population, who also have the resources to pay for it at $25 plus an hour.

In addition, I think that the National Library of Medicine doesn't take on the challenge that we put before ourselves, which is how do we bring different kinds of information together, health data with environmental data, or the TRI with this permanent restriction that John alluded to earlier or with census data, which would be absolutely wonderful, and start talk about, maybe, equity issues for low income populations?

Mr. Wise. How about equity for redistricting.

Mr. Bass. There you go.

Mr. Wise. How about figuring out what the census is? I'd appreciate that a whole lot. Right now, a little editorial aside, but right now we seem to have census by dart board, which is "2.3 percent adjustment this week, maybe we'll do it 3.1. It's West Virginia, let's make that 2.1." They'll go up, and Wisconsin will go down.

Mr. Bass. I think that editorial is well worth commenting on. I think the data should be available where the public gets to see the kinds of manipulation the Census Bureau does to its data. I think it's very important when there's public input.

Mr. Wise. I appreciate very much your participation. I had a great list of questions. You answered them all in your statements. If we have many more witnesses like this, we're out of business.

But I do appreciate it, and all the witnesses who appeared, and I do want to restate that this is the first in a several hearing process, and we look forward to your continuing participation.

[Whereupon, at 12:05 p.m., the subcommittee adjourned, to reconvene subject to the call of the Chair.]

CREATIVE WAYS OF USING AND DISSEMINATING FEDERAL INFORMATION

WEDNESDAY, FEBRUARY 19, 1992

House of Representatives,
Government Information, Justice,
and Agriculture Subcommittee
of the Committee on Government Operations,
Washington, DC.

The subcommittee met, pursuant to notice, at 9:30 a.m., in room 2203, Rayburn House Office Building, Hon. Robert E. Wise, Jr. (chairman of the subcommittee) presiding.

Present: Representatives Robert E. Wise, Jr. and Al McCandless.

Also present: Lee Godown, staff director; Robert Gellman, chief counsel; Aurora Ogg, clerk; and Monty Tripp, minority professional staff, Committee on Government Operations.

Mr. Wise. Good morning. This hearing of the Government Information, Justice, and Agriculture Subcommittee on creative ways of using and disseminating Federal information will come to order.

I am going to ask the indulgence of the witnesses. Many of you made efforts to be here and have come a long way, and I want to make sure we get your testimony in. There are some time constraints that have suddenly come up. There is a meeting of the Democratic caucus at 11. This was actually scheduled before New Hampshire. I'm not sure whether there is a meeting of the Republican conference similarly scheduled or not. But at any rate, it's——

Mr. McCandless. We have a positive direction, depending on which train you're on.

Mr. Wise. Yes. I'm just trying to figure out the message. The Republicans in the primary sent a strong message through Pat Buchanan that was basically middle-income tax relief and America first. The Democrats sent a message through Paul Tsongas that they didn't want middle-income tax relief or America first. Which means that we elect George Bush and you elect—or you sent a strong message for—Dick Gephardt. I think we're all trying to sort out what this means. Somebody noted, though, neither one is from Washington. That may be the message.

At any rate, I'm going to ask if each of the witnesses would summarize their statements so that we can get everybody in. I will show you how serious I am on this, waive my statement and just make it part of the record in its entirety. I want to thank you.

This is the second of a series of hearings that we have been holding on disseminating Federal information, so that we may better understand some of the techniques and technologies and what it is that we should be anticipating. With that, I turn to Mr. McCandless for any opening remarks he may wish to make.

Mr. McCANDLESS. Thank you, Mr. Chairman. I agree with you. I think we should utilize the time for the panels.

Mr. WISE. Great. Thank you.

At this point I would say to the first panel, that this subcommittee has a policy of swearing in all witnesses so as not to prejudice any witness who may appear before it. Do you have any objections?

[No response.]

Mr. WISE. If you would stand and raise your right hand.

[Witnesses sworn.]

Mr. WISE. Thank you. We will proceed in the order that you're listed on the agenda. As I say, your written statement in its entirely has been already made a part of the record, so I would invite you to summarize them any way you see fit.

Mr. Brock, let me just introduce you first. Jack L. Brock, Jr., is director of the Government Information and Financial Management, Information Management and Technology Division of the General Accounting Office.

Nancy Cline is dean of University Libraries, from Pennsylvania State University, University Park, PA. Those of us from West Virginia University have some strong feelings on that score. But we welcome you nonetheless.

Linda Walters, Director of the Information Management Division, Federal Energy Regulatory Commission.

Mr. Brock.'

STATEMENT OF JACK L. BROCK, JR., DIRECTOR, GOVERNMENT INFORMATION AND FINANCIAL MANAGEMENT, INFORMATION MANAGEMENT AND TECHNOLOGY DIVISION, GENERAL ACCOUNTING OFFICE, ACCOMPANIED BY ALICIA WRIGHT, EVALUATOR IN CHARGE

Mr. BROCK. Mr. Chairman, thank you for inviting me here today. Alicia Wright, who is our evaluator in charge, who actually conducted the research that we did is accompanied me today. I will summarize my statement. Out of necessity, I will eliminate some of our examples and I will also, in the interest of time, eliminate the GAO examples as well. But I would ask that those be put in the record.

Mr. WISE. Without objection.

Mr. BROCK. Agencies are increasingly providing less expensive, faster access to important government information. A critical function of many government programs and activities is to develop and share information with a wide variety of users. Frequently this information is critical to the safety and well-being of individual citizens, to the continued economic viability of business or to support important scientific research.

Until recently, almost all such information was distributed via the printed page. Increasingly, however, government agencies are using relatively inexpensive technology to improve access to information in terms of speed, cost, and utility.

At your request, we identified various government applications using such technology. I would like to highlight, very briefly, four examples which are used—CD-ROM, bulletin board systems, voice messaging and facsimile, and floppy disk—to disseminate information.

Probably the product that has the most potential for revolutionizing information access is CD-ROM data bases. CD-ROM is a digital data storage device that has evolved from audio compact disk technology. I am holding in my hand, Mr. Chairman, a single CD-ROM. This contains 600 megabytes of data. If we brought in the equivalent amount of paper, it would be 275,000 pages and it would be a stack of paper 9 plus stories tall.

What's nice about this is that users can search this 9 plus story stack of paper in a matter of seconds. Further, it's a much cheaper way of getting information to the public. The cost of producing and distributing a CD-ROM is only 2/100ths of a cent per megabyte of data. The equivalent cost of paper is $4 per megabyte.

Our first example is up on the board. [See chart 1 at end of prepared statement.] The Department of Commerce uses CD-ROM technology to consolidate over 100,000 separate documents from 15 agencies into a single disk. This disk, and it's the one that I was holding up, the National Trade Data Bank, provides the comprehensive data set covering almost every aspect of U.S. trade and international economics. It allows users to identify potential trading partners, to spot trends, to identify markets, or to survey the economic and demographic conditions of over 250 countries. The cost to publish this disk is $35 for 1 month. The cost of the separate paper-based publications is $8,000.

The next technology I'll highlight is the use of computer bulletin boards. [See chart 2 at end of prepared statement.] In many ways a computer bulletin board is the digital equivalent of the cork board you might find in a grocery store. It provides a computerized means of posting messages, or of reading messages left by others. Bulletin boards enable users to have spontaneous access to information regardless of the time of day, frequently free or at a nominal cost. As opposed to a typical telephone call, time is no longer a factor in making a connection.

Additionally, data from the bulletin board can be downloaded and altered by the user. The bulletin board that we're demonstrating, again, is the Department of Commerce, their economic bulletin board. It offers time-sensitive economic indicators, such as the GNP, the consumer price index, and personal income statistics. Twenty-four hours a day users can get information ranging from current employment statistics to foreign currency rates.

The files are continually updated and are available at or within a very short time of their official release. Users can browse the files free, but they have to subscribe in order to search the entire bulletin board and download the data. Right now, Commerce is getting about 13,000 calls a month.

The next technology is voice mail and facsimile. These are also becoming increasingly viable alternative methods of information sharing. By using these two technologies in combination, users can call in on a telephone attached to a fax machine, they can listen to the selections on the telephone, they can make choices using the touchtone pad, and then push the start button to have the information transmitted.

The example that we're showing up on the tripod is USDA's 24-hour news service called AgNewsFAX. [See chart 3 at end of prepared statement.] It began in April 1990, and makes available the daily, monthly, or yearly list of news releases. Right now, they're getting about 500 calls a week. The primary audience is the news media, but the general public is also using it. News releases ranging from the latest prices on upland cotton to notice of hearings on a tobacco market merger are targeted to specific customers wanting specific information.

Agriculture expects to recover the costs for the system in less than 2 years. After that, the system will produce a net savings to the taxpayers. Probably more important, though, Mr. Chairman, is it provides news and information immediately, instantly, instead of the 2 to 3 weeks it took before.

The last technology I would like to discuss is the old standby, the floppy disk. I'm holding up a floppy disk. I realize it doesn't look very floppy, but it's still called that. The biggest benefit of the floppy is that it has almost universal access. Most people, or many people, have access to PCs at home, work, libraries, school, wherever.

Floppies are cheap, they're lightweight, and they're portable. Once the data are on the disk, they can be manipulated by using a word processing program or a spreadsheet or a data base software package. Disks can be used to distribute moderate amounts of information to multiple users. The example we want to highlight is the Health Care Financing Administration or HCFA. [See chart 4 at end of prepared statement.] They use floppies to distribute the Medicare pricing table.

HCFA and GPO have taken the 146-page Medicare pricing table and put it on these two floppy disks to make it easier for users to access. The floppy disks contain the Medicare program's fee schedule as originally printed in the "Federal Register." The disks are used primarily by physicians in medical billing offices and include necessary costing information and computational spreadsheets to both facilitate and ensure the accuracy of the billing of services provided to Medicare patients.

That concludes the examples we were going to give. We also briefly mentioned two GAO examples. In the interest of time, I won't go into those. However, if we have some time and have questions, I would like to cover that.

I am now available for any questions you or Mr. McCandless might have.

[The prepared statement of Mr. Brock follows:]

United States General Accounting Office

GAO

Testimony

**Before the Government Information, Justice, and Agriculture
Subcommittee, Committee on Government Operations
House of Representatives**

**For Release on Delivery
Expected at
9:30 a.m. EST
Wednesday
February 19, 1992**

INFORMATION DISSEMINATION

Innovative Ways Agencies Are Using Technology

Statement of
Jack L. Brock, Jr., Director
Government Information and Financial Management
Information Management and Technology Division

GAO Form 160 (12/91)
OPR:OIMC/PCC

144

Mr. Chairman and Members of the Subcommittee:

I am pleased to be here today to discuss how some agencies are using technology to provide the public with cheaper, faster access to a wider range of information. These technological applications enable users to search and manipulate information in ways never possible on the printed page. As a result, users can create new information by selecting, combining, and arranging data within a matter of seconds.

The applications that I will discuss today were developed using compact disc-read only memory (CD-ROM), bulletin board systems, voice messaging/facsimile, and floppy disks. The information I will present is based primarily on interviews with users and developers of these applications and on a review of related documents. We did not independently verify the benefits or cost savings.

CD-ROM

It is widely believed that no information product has more potential for revolutionizing information access than CD-ROM data bases. CD-ROM is a digital data storage device that evolved from audio compact disc technology. A single CD-ROM can contain more than 600 megabytes of data, approximately 285,000 pages of text. For example, the entire 20-volume Academic American Encyclopedia takes up only 20 percent of one disc.

CD-ROM users can search the equivalent of thousands of pages in seconds. Further, CD-ROM provides a much cheaper way of getting information to the public: the cost of producing and distributing one CD-ROM is only .024 cents a megabyte. In comparison, paper costs $4.00 per megabyte to print and distribute--over 166 times as expensive.

Unlike data on a floppy or hard disk, data on a CD-ROM cannot be erased or altered. This makes it an excellent technology for permanent storage. Data that are not time-sensitive or that require few updates are best suited to CD-ROM.

The latest version of the U.S. Geological Survey/Special Interest Group CD-ROM Applications and Technology Compendium lists almost 200 different CD-ROM discs containing government data. I will discuss four that highlight the diversity of this technology: the Geologic Long-Range Inclined Asdic (GLORIA)-East Coast from the U.S. Geological Survey, the National Trade Data Bank from the Department of Commerce, the Federal Acquisition Regulation (FAR) and the Federal Information Resources Management Regulation (FIRMR) from the General Services Administration (GSA), and the Classification and Search Support Information System-Classification (CASSIS-CLSF) from Commerce's Patent and Trademark Office.

GLORIA-East Coast, produced on CD-ROM by the Geological Survey in 1990, provides images of the bottom of the ocean, including detailed underwater geological features, sediment texture, and water depths. It comprises sonar-scanned data of the East Coast sea floor and data from the National Oceanic and Atmospheric Administration's Bathymetric Map Series.[1] GLORIA-East Coast combined this information for the first time; it has enabled researchers to use personal computers to analyze the data with a variety of software tools. One user stated that the CD-ROM saved hundreds of hours of processing time because the maps on disc are already digitized and no longer in paper form, making them ready to access. GLORIA-East Coast is available free of charge to all researchers.

The Department of Commerce's National Trade Data Bank is a comprehensive data set covering almost every aspect of U.S. trade and international economics. It contains information from 15 agencies, including the Departments of Commerce, Energy, Labor, and the Central Intelligence Agency. The National Trade Data Bank CD-ROM consolidates over 100,000 documents that would cost over $8,000 to purchase separately. With this CD-ROM, the public, the education community, and business can identify potential trading partners, spot trends, identify markets, or survey the economic and demographic conditions in over 250 countries. Each month, Commerce distributes 1,000 copies of the CD-ROM to regular subscribers, one-time buyers, and federal depository libraries. Discs may be purchased singly for $35 or through a $360 annual subscription that includes one disc a month.

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[1] Bathymetry is the measurement of depths of water in oceans, seas, and lakes.

GSA and the Government Printing Office have produced a CD-ROM containing the FAR and the FIRMR--governmentwide regulations on procurement, and on acquiring, managing, and using federal information processing resources. GSA's FAR/FIRMR CD-ROM helps agencies and private vendors follow federal guidelines on purchasing computer equipment. While the paper versions cost users $204 a year, GSA charges $106 a year for its CD-ROM and updates it quarterly. Each quarterly disc includes the latest changes reflected in the FIRMR transmittal and the federal acquisition circulars.

The Patent and Trademark Office has taken its on-line system, called CASSIS, and replaced it with three CD-ROM titles. One of the titles--CASSIS-CLSF--lists all patent numbers and their classifications. With this, a user can search and identify particular patent numbers, and determine whether an invention or innovation has already been patented. In fiscal year 1990, the Patent and Trademark Office saved at least $300,000 by replacing its on-line system with CD-ROM. Currently, 400 subscribers exist for all three CASSIS titles; in addition, each of the 80 patent depository libraries receives a copy. Users include researchers, students, professors, lawyers, and business people. The Patent and Trademark Office charges $210 a year for CASSIS-CLSF and updates it every 2 months.

A trial project that has produced several CD-ROM titles is the National Agricultural Library Text Digitizing Project. In 1988, a cooperative project began between the National Agricultural Library and 42 land-grant university libraries. The project was designed to test scanning hardware and indexing/search software for capturing text and images in digital format.

So far, the National Agricultural Library has scanned information on aquaculture, international agriculture research, Agent Orange, and acid rain and has distributed it on separate CD-ROMs. In the next 6 months, the Library plans to issue three new CD-ROMs: a collection of research material from George Washington Carver, 18 volumes of the Journal of Agronomy, and information on water quality. The discs will be free of charge to land-grant libraries and agricultural researchers.

The Library has also sent digitized data between a library and other parts of a campus using a campus computer network, and between libraries. Recently, the Library has begun sending documents over Internet--a nationwide computer network--to 14 land-grant libraries. The pilot test is scheduled to end late this year.

BULLETIN BOARD SYSTEMS

A computer bulletin board system is the digital equivalent of the cork boards found in grocery stores: it provides a computerized means of posting messages or reading messages left by others. Computer users gain access to bulletin boards with a modem using telephone communication lines. Government agencies are beginning to use bulletin boards to disseminate time-sensitive and quickly changing information. Many government bulletin boards are free or have nominal subscription costs.

A bulletin board system offers advantages as an information dissemination mechanism. It enables users to have spontaneous access to the information 24 hours a day. For instance, someone in Los Angeles can access a bulletin board system in Washington, D.C., anytime of the day or night. In addition, data can be downloaded--transferred to the requesting computer--and altered.

Bulletin board systems also have limitations. Most contain only small amounts of data. Often the data on the screen are only ASCII text; graphics and other types of data usually cannot be found on a bulletin board. Because data can be manipulated, the data are not secure and should not be relied on for archival purposes.

One bulletin board system that demonstrates the potential of this technology's use for time-sensitive and quickly changing information is the Department of Commerce's Economic Bulletin Board. It offers time-sensitive economic indicators such as the gross national product, consumer price index, and personal income statistics. Twenty-four hours a day, users can get information ranging from current employment statistics to foreign currency rates. The files are continually updated and are available at or within a short time of their official release. The data come from several agencies, including the Treasury Department and the Bureaus of Census and Labor Statistics. Users may browse selected files as often as they like for free, but must subscribe in order to search the entire bulletin board and download the data. The subscription fee is $35 a year and from 5 cents to 20 cents a minute, depending on the time of the call. This bulletin board receives an average of 13,000 calls a month and has 32 telephone lines.

Some government information is available on Internet, the main computer network used by the U.S. research community. Internet is made up of more than 5,000 unclassified national, regional, local, and overseas networks. During our audit of the 1988 Internet computer virus, we came to appreciate Internet's potential as a fast, effective means of distributing GAO reports. To gauge the interest of Internet users in obtaining our reports, in July 1989 we made our report on the Internet virus--Computer Security: Virus Highlights Need for Improved Internet Management (GAO/IMTEC-89-57, June 12, 1989)--available over three Internet bulletin boards. Internet users were given the option of retrieving the report electronically or using electronic mail to request a hard copy.

We found a large audience for our products within the Internet community. Since then we have used Internet to distribute ten additional GAO products on such topics as computer security, education, the Strategic Defense Initiative, and maternal and child health care. As of January 15, 1992, over 1,200 copies of our reports had been retrieved electronically. Our Office of Information Management and Communications is working on several technical issues that may enable us to move toward large-scale electronic report distribution.

Another example of electronic distribution is Project HERMES, a 2-year information-dissemination pilot project to transmit Supreme Court decisions electronically. The project uses a stand alone personal computer from which all decisions are transmitted to subscribers through a modem. Thirteen subscribers were chosen to participate in Project HERMES, including the Associated Press, the Government Printing Office, West Publishing, and the

Consortium of University Libraries. Subscribers pay a yearly fee of $500.

The pilot project ended last month. The Supreme Court will next decide whether to continue the project or try another approach. One option being considered is operating an electronic bulletin board.

VOICE MESSAGING/FACSIMILE

Facsimile is the transmission of printed information from one locale to another by encoding the printed material into digitized form and converting it back to its original form once it is received. Voice messaging, sometimes known as voice mail, automates spoken message delivery over a telephone network by using processed voice input and output and computerized routing and storage. Combined, these technologies allow users to call in on a telephone attached to a fax machine, listen to the selections on the telephone, make choices using the touchtone pad, and push the start button to have the information transmitted.

Combining voice messaging and facsimile gives users some benefits. Users can select just the information they need and immediately receive a paper copy of the information at any time of the day or night. The cost to the user is generally only the phone call.

The Office of Public Affairs at the Department of Agriculture is using this technology to offer a free, 24-hour service called AgNewsFAX. It began in April 1990 and makes available a daily, monthly, or yearly list of news releases.

At this time, AgNewsFAX is getting 500 calls a week. The primary audience is news media but it is also available to the public. A sample listing of news releases from September 1991 included the world market price for upland cotton, an announcement of an end to the Mexican fruit fly quarantine from eight Texas counties, and notice of an Agriculture hearing on a proposed North Carolina tobacco market merger.

The Office of Public Affairs expects to recover the costs for the system in less than 2 years; after that, the system will produce a net annual savings to the taxpayers. In addition, it provides news releases instantly, instead of forcing users to wait 2 or 3 weeks for releases to be copied and mailed.

FLOPPY DISK

Floppy disks are small flexible disks that can store up to 1.4 megabytes of data. One benefit of the floppy disk is nearly universal access: many people have access to personal computers at home, work, schools, or libraries. They are cheap, lightweight, and portable. Once data are on the disk, they can be manipulated using a word processing, spreadsheet, or data base software package. Disks can be used to distribute moderate amounts of information such as software, text, data bases, and data files to multiple users.

An example of information that can be manipulated using a spreadsheet and word processing package is the Health Care Financing Administration (HCFA) Medicare pricing table. HCFA and the Government Printing Office have taken the 146-page Medicare pricing table and issued it on two floppy disks to make it easier for users to access. The floppy disks contain the final rule for the Medicare fee schedule, which was originally printed in the Federal Register. The disks will be used primarily by physicians and medical billing offices and include text in WordPerfect version 5.1 format, Lotus 123 worksheets, and an ASCII text help file. The floppy disks and the Federal Register hard copy cost $44.

The Lotus worksheets and table on the floppy disks enable users to manipulate data much more easily than with hard copy. They can use the worksheets to determine prices or use search tools to find particular information.

GAO is currently developing an electronic audit guide on floppy disk. This guide will summarize a methodology for assessing information technology purchases at different stages of development. The expected audience includes inspector general officials and other auditors who review federal efforts to acquire and implement information technology resources. So far, we have developed and tested a prototype version of the audit guide. The prototype allows instant access to materials--including procurement regulations and Office of Management and Budget directives--by simply selecting key words. This will give auditors not only a guide, but also all the regulations and directives needed for the audit.

In summary, the technologies discussed today have made it easier to obtain information and have the potential for cheap, fast, and effective public access to a wide range of government information. What we have seen is encouraging and presents opportunities that should be further promoted and explored. We have enclosed an attachment that lists the names and telephone numbers of sources for more information on the examples discussed.

This concludes my statement. I would be glad to respond to your questions.

ORDERING INFORMATION FOR TECHNOLOGY EXAMPLES

TITLE	POINT OF CONTACT	COST
GLORIA-East Coast Topic: Oceanic Data	U.S. Geological Survey 703-648-6525	Free to researchers
National Trade Data Bank Topic: Trade and Export Information	Department of Commerce 202-377-1986	$35 for one disc or $360 for an annual monthly subscription
FAR/FIRMR CD-ROM Topic: Acquisition Regulations	Government Printing Office 202-783-3238	$106 for an annual quarterly subscription
CASSIS Topic: Patent Information	Patent and Trademark Office 703-305-9154	$210 for an annual quarterly subscription
Economic Bulletin Board Topic: Economic Information	Department of Commerce Voice: 202-377-1986 Data: 202-377-3870	$35 for an annual subscription plus 5 cents to 20 cents a minute
AgNewsFAX Topic: Agriculture News Releases and Fact Sheets	Department of Agriculture Voice: 202-720-4026 AgNewsFAX: 202-690-3944	Free
HCFA Medicare Disk Topic: Medicare Pricing Table	Government Printing Office 202-783-3238	$44 for disk and hard copy

(510769)

Chart 1

GAO CD-ROM

National Trade Data Bank

Chart 2

GAO Electronic Bulletin Board

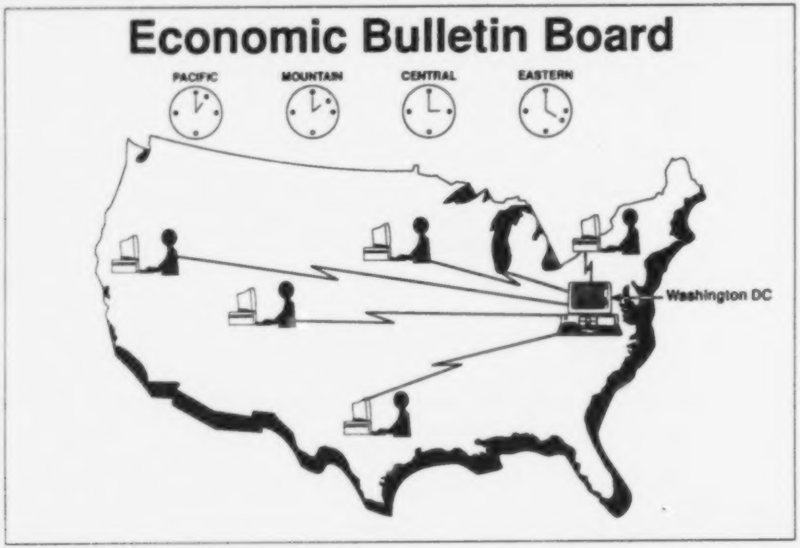

Economic Bulletin Board
PACIFIC
MOUNTAIN
CENTRAL
EASTERN
Washington DC

Chart 3

GAO Voice Messaging/Facsimile

AgNewsFax

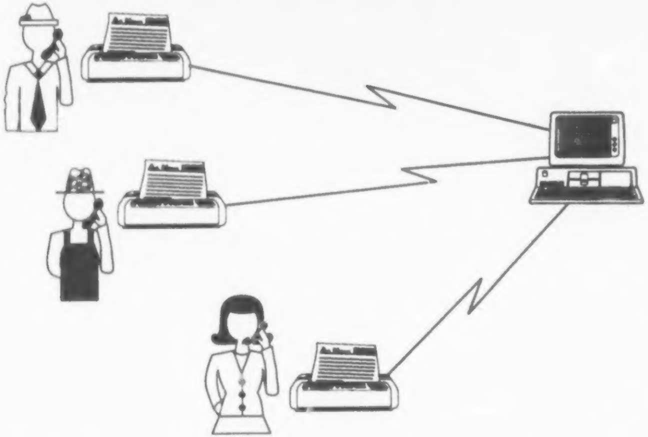
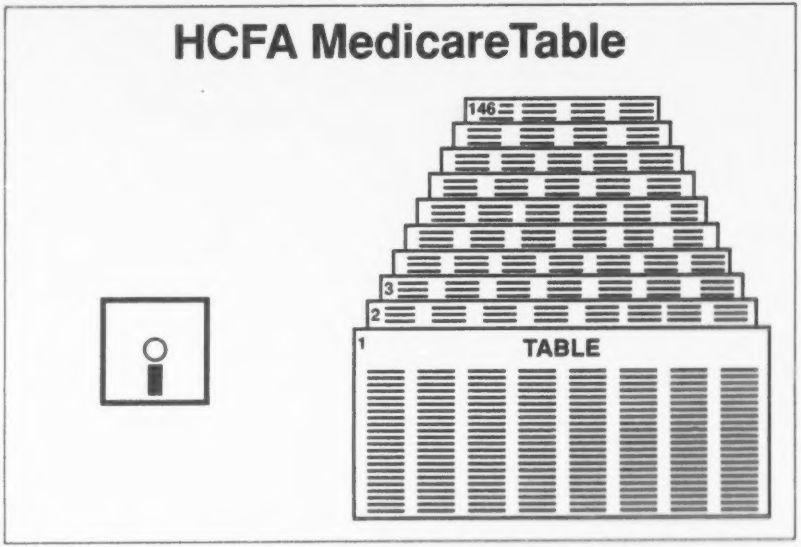


Chart 4

GAO Floppy Disk



HCFA MedicareTable

146
3
2
1
TABLE

Mr. WISE. Thank you. We will complete the panel, and then turn to questions.

Next will be Nancy Cline, dean of University Libraries, with Penn State University.

STATEMENT OF NANCY M. CLINE, DEAN, UNIVERSITY LIBRARIES, PENN STATE UNIVERSITY

Ms. CLINE. Thank you, Mr. Chairman. I'm very pleased to be here today because these are important issues for the Nation as we look to maintain and strengthen the relationships between education, industry, and the government—and also to revitalize the economy. Information is perhaps the most vital resource that we're responsible for, and we all play a part in the effective management and use of this resource.

As one member of the Association for Research Libraries, Penn State University is engaged in several projects, which I have described in my written statement. I would like to describe briefly for you Penn State, to provide a context and to highlight the significance of these particular projects and to assure you that the government information now available in electronic format does offer new opportunities to meet growing information needs, and to eradicate geographic barriers and to overcome rural isolation.

Penn State is a public research university with a land grant tradition. It's a large, comprehensive university with over 71,000 students, employing 5,000 faculty, and more than 10,000 staff. There are 23 campuses distributed across the Commonwealth of Pennsylvania. With this distributed university, the very nature of our teaching, research, and public service requires constant communication and a highly effective sharing of resources.

The University Libraries, for which I have responsibility, provide materials and services across all of these locations. We, therefore, depend upon LIAS, our library information access system, an online integrated system developed at Penn State, as the primary means of providing access to more than 3 million titles which are located in nearly 30 physical facilities comprising the University Libraries.

On a daily basis, over 33,000 search inquiries are posted against this online catalog, enabling our students, faculty, staff, and the public to identify items which will aid them in their studies or work.

U.S. Government publications are among the materials which are cataloged in LIAS. And since LIAS may be accessed by the public, by calling into our network or by accessing it through the Internet, this has made it possible for a significant number of people to now identify government information resources from the convenience of a terminal which may be located in their home, dorm room, office, or other work site. For most residents of the Commonwealth of Pennsylvania, access to LIAS, our online catalog, is available through a local phone call to a Penn State campus.

Many people are also using online catalogs from numerous other libraries. There are, at the moment, more than 200 catalogs accessible on the Internet. One of the difficulties is that, in order to use these catalogs effectively, one must learn all of the different search techniques of each catalog. Recently, there have been increased efforts to collaborate on the development of computer-to-computer searching.

Implementation of Z39.50—and I smile because its title is longer than a paragraph so, if you will bear with me, I will continue to use "Z39.50"—this is a capability which permits a searcher to use the conventions of his or her own institution's catalog and to search and retrieve information from those of other institutions.

One example of collaboration, currently underway, exists between Penn State and the University of California's division of library automation. These are two public universities which have developed an interface that results now in improved searching efficiency for literally thousands of users at each of these institutions.

In a similar manner, we will be able to use the capabilities of Z39.50 as an interface to enable Penn State students and faculty to have access to various subject data bases, particularly government data bases such as ERIC, MEDLINE, or AGRICOLA—and thereby facilitating their searching because they will be able to use commands with which they are familiar.

Now, you had asked me to specifically address PENpages, the Pennsylvania extension network, which provides a computer-based information service. This has evolved from Penn State's land grant tradition where we have had a strong institutionwide commitment to agriculture.

The cooperative extension program is spread across 67 counties in Pennsylvania. Those individuals in the field have an exceptional need for timely information. When they are faced with dealing with issues of floods, drought, diseases that affect herds and flocks, they cannot await the delivery of printed information. PENpages was developed specifically with those individuals in mind.

The contents of the data base are collected from Federal, State, local resources including many items which are prepared by the faculty and staff of Penn State. These are made available on PENpages for anyone to access with a home computer, modem, and telephone.

The documents which comprise PENpages come from 37 of the 50 State land grant institutions and also from several Federal agencies. The subjects are wide ranging, including: Consumer education, commodity prices, childcare, family finances, agriculture production, and a whole host of other topics.

In 1991, there were 7,840 documents comprising PENpages. These were accessed in that calendar year 194,000 times. The extension staff, for whom this was originally designed, used 92,000 of the accesses; the general public used 102,000 of those accesses.

We believe this is a very important example where the use of libraries, government information in electronic format, telecommunications networks, and the expertise that is affiliated with the university have been brought together to the benefit of a significant industry in our Nation—one that is vitally important to our economy.

If I may, I would like to veer for a moment from my prepared text and just address why projects such as the ones I have been speaking to are important. They are innovative and, in some sense, they raise questions in terms of why a university may be moving in this direction. I would like to take a moment and highlight what we feel are very believable impacts and the significance of such projects.

Our purpose as a university library is to provide needed information to solve the problems of users, whether those users be students, faculty, independent researchers, government agencies, business people, farmers, the public at large.

As one example, a beef producer, let's take a small family owned business which is facing new pressure from a health-conscious consumer organization. There are a lot of pressures that there should be less fat in the meat which reaches the retail market. The farmer is faced with the question of how seriously will this trend affect his production, his industry, in other words. The options may be to simply fold up, to look to different breeds of cattle, or to consider different feed for the cattle.

Research libraries daily are involved in these types of questions. We would, first of all, suggest that people use the online catalog, the LIAS information system, and perhaps consult other library catalogs via the network. This is where the benefit of the Z39.50 application can be brought to bear, because then the individual could also conveniently search AGRICOLA or other data bases.

Then, PENpages itself is a wealth of information because of the textual content of the data base and where advice can be derived from those who are experts, the cooperative extension workers. Also someone might want to consult market data. Then we would perhaps, depending upon the nature of the need, suggest that a person consult information from other schools or other institutions.

This is where the North Carolina State University digitized document transmission project, which I refer to in my statement, is becoming very beneficial because it enables us to move both text and image across the existing Internet. There are a whole host of other online resources on the Internet.

The inquiry might develop along the lines of seeking weather and meteorological data, which would affect crop production, feed, and grasses. There might be questions about residual pesticides. There may be questions of the agriculture waste management that would have an impact in terms of a runoff, the care for streams, the environment, water tables affected, et cetera, and of course there is the whole host of regulations that affect everyone's business and industry.

Many of these inquiries could lead us in the direction of what are referred to as geographic information systems. In that regard, the item included in my statement on the ARL, the Association of Research Libraries, geographic information systems literacy project represents a partnership, an emerging partnership, with industry which will contribute to the Nation's capability to use, interpret, and apply the vast amounts of spatially referenced data which are now being produced by many of our government agencies.

The innovative and creative uses which are now being made with government information can occur in smaller institutions, not only in large institutions such as Penn State. What is important is that we find ways to share the results of these enterprises and to facilitate collaboration.

I think one promising development of late is the emergence of the coalition for networked information, a coalition that draws together the commitment and expertise of both the computing communities and the research libraries to advance the uses of the Internet.

For the coalition and others, there is a unique advantage which government information provides. Since it is in the public domain, there are opportunities for a diverse array of institutions to work on solutions and to add value to the basic resource. The lessons that can be learned from network prototypes which now involve government information should result in a broad extension of an entrepreneurial advantage that will both allow private sector and public sector participants to gain from these efforts.

I would like to stress that there is a direct link in the United States between the quality of education and research and the economic well-being and the economic competitiveness of the Nation. These new relationships which are evolving now among educators, businesses, government units, agencies and libraries are very important to our future. I would also stress that we cannot wait for a perfect set of solutions to all of the questions surrounding electronic data bases and networks.

Librarians are very solid partners in the education, economic development, and research programs of this country. The value of government information has been and will continue to be greatly enhanced through the services that are provided through libraries.

The innovative applications being made today in our educational institutions require that the government itself recognize the distinct role that Federal information resources play in ensuring the vitality of our government, industry, and educational enterprises.

I would hope that some of the illustrations which I have touched on today would convince you of the importance of Federal information electronic format.

[The prepared statement of Ms. Cline follows:]

Statement of
Nancy M. Cline
Dean of University Libraries
Pennsylvania State University Library

on behalf of the
Association of Research Libraries

before the
Subcommittee on Government Information, Justice, and Agriculture
Committee on Government Operations

February 19, 1992

Thank you for the opportunity to provide testimony before the Subcommittee on Government Information, Justice, and Agriculture. My name is Nancy Cline and I am the Dean of University Libraries at The Pennsylvania State University. I am speaking today on behalf of the Association of Research Libraries, a non-profit association of 119 research libraries in North America. The membership of ARL is actively involved in the provision of information resources – including those that are unique, to the research and education communities of North America. Research libraries are also key participants in numerous experiments and pilot programs that demonstrate the utility of high capacity networks for the exchange and use of information.

Although there are numerous innovative programs which utilize government information that we at Penn State are involved in, there are five that I would like to highlight in my remarks today. These are:

- Z39.50 - Information Retrieval Service Definition and Protocol Specifications for Library Applications
- PENpages - Pennsylvania Extension Network, Computer-based Information Service
- NCSU Digitized Document Transmission Project
- EDIN - Economic Development Information Network
- ARL Geographic Information Systems Literacy Project

Personally, I was interested to note that nearly a decade has passed – nine years – since I was invited to speak before the Ad Hoc Committee on Depository Library Access to Federal Automated Data Bases. In his invitation letter, Rep. Augustus Hawkins noted: "the purpose of the Depository Library System, as outlined in Title 44, is to provide the American people with ready, free access to government information and publications. Since increasing amounts of information generated by the Federal Government are available exclusively in electronic format, we are examining the feasibility of making such information available through the Depository Libraries." Among my notes from that session were statements which must be reiterated today... "electronic data offers us the prospect of meeting information needs which libraries are not currently able to meet and it gives us the opportunity to transcend problems of geography..." Those words are as true today as a decade ago.

I am pleased that these questions are still being pursued in many forums such as this hearing today. And, I can assure you that electronic information does offer many new opportunities to meet growing information needs, to eradicate geographic barriers and to reduce rural isolation.

Today we hear of "libraries without walls" and increasingly, the role of libraries is inextricably linked with computing and telecommunications. The value of libraries in fulfilling users' information and research needs is widely acknowledged -- yet at the same time, it remains one of the best kept secrets of today's society. In many ways, libraries are the silent partners in revitalizing education and economic growth.

Allow me to briefly describe my own university context as a foundation for my remarks today. Penn State is a public research university with a land-grant tradition. It is a large and comprehensive university with over 71,000 students, about 5,000 faculty and more than 10,000 staff. There are 23 campuses, including the University Park campus – the largest campus with over 38,000 students and where central administrative functions reside; a medical college at Hershey; and the other campuses distributed across the Commonwealth, each distinct, and most of them at considerable distance from one another. Nine out of ten Pennsylvanians live within thirty miles of a Penn State campus. With this distributed university, the very nature of our teaching, research, and public service requires constant communication and highly effective sharing of resources. Therefore, computing and telecommunications are essential components in our organization.

The University Libraries, for which I have responsibility, provide materials and services across all these locations. We depend upon LIAS (Library Information Access System), an online, integrated library system developed at Penn State, as the primary means of providing access to the more than 3 million titles in the nearly 30 physical facilities which comprise the University Libraries. On a daily basis, over 33,000 inquiries are made of this online catalog, enabling students, faculty, staff, and the public to identify items which will assist them in their studies or work. The LIAS system permits a faculty member at Erie, working on plastics technology, to have access to the same materials as a colleague working at the University Park Materials Research Lab would have. An engineer and a team of physicians working on the Penn State artificial heart device can determine the availability of a medical text by using a terminal in either of their offices or labs, by using the telecommunications network to access LIAS. Soon, they will also enjoy greater productivity in their multi-site collaboration, when libraries can provide the complete text of journal articles over these same networks.

Among the publications included in the LIAS online catalog are U.S. government documents. Penn State has been a federal depository library since 1907, and has invested significant resources -- staff, facilities, equipment, and reference tools -- to capitalize upon the publications distributed through this program. By providing descriptive information about U.S. documents in the online catalog, it is easier for students, faculty -- and the public at large -- to identify needed publications and to confirm where they are available for use. In providing online access to these resources, the use of government documents has increased. Since LIAS may be accessed by the public, calling into our network or accessing it through the Internet, this has made it possible for a significant number of people to now identify government information from the convenience of a terminal located in their home, dorm, or office. For most residents of Pennsylvania, access to LIAS is available through a local phone call to a Penn State campus.

Z39.50 - Information Retrieval Service Definition and Protocol Specifications

Many people are now using online catalogs of numerous libraries. They are no longer limited to using only the catalog of their own institution or agency. There are more than 160 online catalogs accessible on the Internet. The Internet is the existing set of interconnected local, state, regional, and national telecommunications networks. One of the difficulties has been that in order to use these catalogs, one must learn the idiosyncrasies of the search conventions of each catalog. Recently there have been increased efforts to collaborate on the development of computer-to-computer searching. Implementation of Z39.50, the capability which permits a searcher to use the conventions of his or her own institution's online catalog to access and retrieve information from another online catalog, is proceeding steadily.

One example of the collaboration in this area is between Penn State and the University of California's Division of Library Automation. These two public universities, assisted with some funding from an industry partner, Digital Equipment Corporation, have developed an interface that will enable LIAS users to search the vast collections of the UC libraries' MELVYL system, using those LIAS search commands which are familiar and comfortable to them. Conversely, UC's students and faculty who are accustomed to the MELVYL commands and search designs, will be able to easily use them to search the contents of LIAS, 3,000 miles distant, but affording access to some unique research collections. Implementation of this interface will result in improved productivity for thousands of searchers at both institutions.

In a similar manner, this Z39.50 interface will enable Penn State to provide access to various subject databases -- for example government databases such as ERIC, MEDLINE, or AGRICOLA -- and to facilitate users' searching by using the familiar structure and commands of our LIAS system. With over 70,000 students, we do not want to teach different search strategies for the hundreds of available databases, public and private. Z39.50 helps libraries perform their primary mission, to bring together the user and information resources. Innovative developments and collaborative research will result in measurable productivity gains for the researchers using these databases.

PENpages

Penn State, as a land-grant institution, has a strong commitment to agriculture. The Cooperative Extension Program, with offices and field staff in 67 counties, has an exceptional need for timely information. Drought, floods, blight, diseases affecting herds and flocks -- these do not await the delivery of information in printed publications -- people solving these problems cannot afford delays. PENpages, established and managed by Penn State, is a computer-based information service, available 7 days a week, without fee.

PENpages started in 1985 as a project sponsored by the College of Agricultural Sciences. The intent of the project was to develop a computerized, full text, information delivery system for the citizens of Pennsylvania. In 1984, the Pennsylvania Legislature appropriated $1.9 million to fund the creation of a computerized network to all 67 county offices in Pennsylvania. This network became the foundation on which PENpages was built. The first users of the information stored on PENpages were county extension staff. They retrieved documents from PENpages and incorporated them into the newsletters and radio programs delivered in the counties. Although PENpages started slowly, by 1987 there were more than 2,500 documents stored in the database and these documents received about 27,000 accesses from county and public users of the state-wide electronic communications network. In 1991, 7,840 documents were stored in the PENpages database; they were accessed 194,000 times (county extension staff in Pennsylvania accessed PENpages 92,000 times and our public users accessed PENpages 102,000 times). During the six years of PENpages existence, the College of Agricultural Sciences at Penn State has supported continued growth and sophistication in the computerized support of this document delivery service.

PENpages contains documents of interest to consumers and the staff of other national and international institutions of higher education. The seventy-eight hundred documents cover subject matter of interest to producers and consumers of agricultural products. The contents are collected from federal, state, and local sources, and loaded on PENpages for anyone to access with a home computer, a modem or telephone. The documents on PENpages come from 37 of the 50 states land grant institutions and several federal agencies. Subjects covered by the content of PENpages includes: consumer education, food safety, forest resources, nutrition, pesticide education, plant pathology, water quality, commodity prices, child care, family finances, and agricultural production recommendations. The most important attribute about PENpages is providing timely and valuable information rapidly to users 24 hours a day, 7 days a week.

The total costs of PENpages has been born by the College of Agriculture Sciences from funds allocated from state appropriations. The original equipment cost to support the development of PENpages was about $800,000 of the original $1.9 million appropriation in 1984. The annual direct operational cost of PENpages has averaged $250,000. This funding has all come from reallocation of funds within the College of Agricultural Sciences. The users of PENpages are provided the information free of user charges.

PENpages is used by Penn State Cooperative Extension in support of the educational and information programs within Pennsylvania. It is also made available to other agencies on a national and international basis. In fact, anyone can make use of PENpages by calling 814-863-4820, using a home computer and a modem to retrieve information.

While a significant amount of information resides in the PENpages database, there are times when agents need additional information and they frequently identify books or journals from the LIAS database. We have established an electronic request form which they may submit through electronic mail and the Libraries send either a fax of the item, or if a book, it is sent by courier. The cooperation is intended to improve the productivity and efficiency of the agricultural extension staff and to make certain that the public -- the farmer, food manufacturer, health service providers, and others -- will receive the most up-to-date and reliable information needed to address their problems.

This is one example where the use of libraries, government information in electronic format, telecommunications networks, and the expertise affiliated with a University are brought together to the benefit of a significant industry in the Nation and one that is important to our economy. Additionally, while the primary benefit may accrue to Pennsylvania's economy, there is a significant gain for the U.S. when one considers the international marketplace. The extensive trade in agricultural products, the number of food-processing facilities, and the extensive research on agricultural by-products all factor into the Nation's economy.

NCSU Digitized Document Transmission Project

In a related project, the North Carolina State University Libraries has taken a leadership role in a national research initiative to explore the use of the NSFNET/Internet for the transmission of digitized text and images. Several institutions including Penn State are working on this project with the National Agricultural Library Scanned images are transmitted to libraries, researchers' work stations, and agricultural extension offices. In time this program will be extended to the entire land-grant community of over 100 institutions as well as to other federal agencies and to the international agricultural research community. It is important to note that this particular project builds on the existing national infrastructure for linking computer networks and it is a project which has been supported and funded through multiple government agencies, including the National Agricultural Library and the Department of Education; with industry support from Apple Computing and university contributions of equipment, facilities, and research expertise.

EDIN - Economic Development Information Network

Libraries are providing gateways to many electronic bulletin boards whose subjects cover a wide range -- for example, education, energy, prisons, transportation, and waste management. Among these are over 60 government bulletin boards as well as many which have

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been established by universities or professional associations. Users turn to bulletin boards for timely information. In July, ARL published a *Directory of Electronic Journals, Newsletters, and Academic Discussions List*, and will be updating this publication this Spring to reflect the sizable increase in new electronic offerings.

At Penn State there is a collaborative effort to provide EDIN, the Economic Development Information Network. Supported by the Pennsylvania State Data Center, the Institute of State and Regional Affairs, and Penn State Harrisburg, this network information service provides access to bulletins and news releases, recent issues of *Commerce Business Daily* (a publication from the U.S. Dept. of Commerce), directories of economic development centers and agencies, database files pertaining to demographic and economic data, calendars of important events, and the capability to request specific publications or services. Like PENpages, it includes government information resources from both the federal and state agencies, and has been made available to the public through a partnership of governmental and educational contributors.

ARL GIS Literacy Project

Businesses, schools, state and local governments, and many others rely heavily on data from federal agencies. One of the foremost sources of data is the Bureau of the Census, now producing a substantial portion of the censuses of population, housing, business, industries in electronic formats. The need exists to provide census data over networks and for some of the products which are produced in other electronic formats, such as CD/ROMs, there is a need to facilitate the use of the data.

Many depository libraries are in receipt of numerous datafiles such as the Census TIGER (Topographically Integrated Geographic Encoding and Referencing System)/Line Files that permit the application of Geographic Information Systems. However, these libraries often lack software to access this critically important data. The TIGER/Line files have great value for applications in local, state, and regional economic development programs, planning, land use, environmental monitoring, congressional redistricting, and for numerous other purposes in the public sector as well as in the educational and research settings.

The Association of Research Libraries, in partnership with Environmental Systems Research Institute, Inc. (ESRI), has initiated the ARL GIS Literacy Project. This project seeks to introduce, educate, and equip depository librarians with the skills needed to provide access to spatially referenced data in multiple formats. The increasing reliance upon geographical information systems, by multiple user communities, requires that librarians become both effective users as well as leading educators in the use of this new resource.

Participating libraries -- a mix of large public libraries, state libraries, and public and private university libraries -- will dedicate needed equipment and staff resources to this project. These libraries will also commit to serving as "resource libraries" to other institutions that may elect to offer GIS services. ESRI will donate ARC/View and additional software to this project as well as supporting training and a users' conference. Collaboration across the educational, governmental, and private sectors will bring a significant gain to the Nation's ability to deploy significant data resources.

Many government agencies create information resources in electronic formats but they do not reach the public, or even the depository libraries in the current system of distribution. With the increasing strength and capabilities of the Internet, librarians would like to secure greater access to these electronic resources. There will probably be different means available for different types of information resources, depending upon the mission of the agency, the nature of the information (image, text, etc.) and the ever-changing capabilities of the libraries to receive, display, and disseminate electronic information. Certainly there are libraries today which would like to receive electronic resources and they may be the avenue through which early experimentation can be carried out so that models may be developed for large scale distribution and access.

Many of the innovative and creative uses of government information occur in small institutions as well as in the larger ones. We must find ways to share the results of these enterprises and to facilitate collaboration. One promising development has been the emergence of the Coalition for Network Information (CNI), a recently formed coalition of ARL, EDUCOM, and CAUSE. Its purpose is to draw together the commitment and expertise of the computing and research libraries communities and to advance the uses of the Internet/NREN for scholarship. For the Coalition, and for others, there is a unique advantage which government information provides -- since it is in the public domain, there are opportunities for diverse institutions to work on solutions, and to add value to the basic resource. The lessons learned from network prototypes involving government information will result in a broad extension of an entrepreneurial advantage, both allowing private sector and public sector participants to gain from their efforts.

There is a direct link in the U.S. between the quality of education and research and the economic well-being and the economic competitiveness of the Nation. New relationships are evolving among educators, businesses, governmental units, and libraries. The future depends on effective partnerships.

We cannot wait for a perfect set of solutions to all the questions surrounding electronic databases and networks. I urge you to consider proposals such as WINDO, H.R.2772, the GPO Wide Information Network Data Online, that seeks to provide public access to government information in electronic format. Ready, free, equitable access to government information is essential in assuring an informed electorate, in addressing information needs of business and industry, and in maintaining the growth of our research enterprise.

The libraries of this Nation are one of its greatest assets. Libraries and librarians are partners in education, economic development, and research. The value of government information has been, and will continue to be, greatly enhanced through the services provided through libraries. The innovative applications which are being made by libraries and educational institutions require that the government recognize the distinct role that federal information resources play in ensuring the vitality of our government, industry, and educational enterprises. I hope that some of the illustrations which I provided today will convince you of the importance of providing federal government information in electronic formats.

"Liberty cannot be preserved without a general knowledge among the people, who have a right... and a desire to know." John Adams

Mr. **Wise**. Thank you very much. I would note that I also appreciate what you've done and that you have not waited on the Federal assistance or policy either.

Next is Linda Walters, director of Information Management Division, with the Federal Energy Regulatory Commission.

STATEMENT OF LINDA R. WALTERS, DIRECTOR, INFORMATION MANAGEMENT DIVISION, FEDERAL ENERGY REGULATORY COMMISSION

Ms. **Walters**. Thank you, Mr. Chairman. I appreciate the opportunity to tell you all about our CIPS system, which is an electronic bulletin board at the Federal Energy Regulatory Commission. What the Commission did is we started to talk to the industry we regulate. In particular, the Federal Energy Bar Association came to us and wanted us to look at ways to provide more timely access to our information. This information to which everybody wanted to have more timely access was the documents that the Commission issues every day at 10 and 3. Basically our regulations, our proposed interim and final rules, our initial decisions, opinions, notices, and orders.

Before the bulletin board, we only had them available in paper copy. The public would either have to come to our public reference room and make a copy, or they could wait until it appeared in the "Federal Register," or they could also have copies mailed to them.

One of the several goals we had in mind when we put together the bulletin board was to put the public on equal footing—to reduce the advantage of geographic location. We wanted to provide the public with immediate access, to have the public have those documents at 10 and 3 when the paper copy was issued. We also wanted to reduce the time and cost burden to the public for having to send a messenger down to the headquarters' office or to come themselves.

In 1987, we began to look at bulletin boards. What we did is, we wanted to see what other Government agencies were doing so we went to the Department of Commerce. After looking at their economic bulletin board, we came back to our agency and did an analysis of hardware and software that was on the market.

We ended up putting together a bulletin board that was very similar to the one at the Commerce Department. The cost to us was approximately $35,000, and that included the hardware, off-the-shelf software, and some services to customize that software to meet FERC's needs. The planning only took us about 5 months.

During the planning stage, it was critical that we had good internal procedures written. The documents that I'm talking about are created throughout the Commission by staff. All of those documents would form the data base of the CIPS, so it was critical that the internal procedures were followed.

We also wrote a user guide, which I have copies of—I meant just to provide the committee with them—that describes the system and how you can access it. We also were fortunate because we had top management support in putting together this bulletin board.

During the planning stage, we did make some decisions that would affect the system. One was we just started out as a little experiment, which now has lasted almost 4 years. We also decided to manage it with existing staff. We were going to offer it free of charge.

Since we weren't sure how long we were going to have the bulletin board on as an experiment, and we could not guarantee that all of the documents that were issued on a daily basis would be on the system, we decided to offer it free. We also decided to have two identical systems: One would act as a host and another as a backup so there would be very little down time.

We had only provided one-way communication—we only put information on the bulletin board—users could not send us messages. This was mainly because we were doing it with our existing staff and just didn't have the people to sit and read messages from the users.

We went public on April 15, 1988. At that time we had seven telephone lines, approximately 140 calls were coming in a day, and the files that were downloaded amounted to about 6,200 monthly.

Well, today we have 12 telephone lines with two of them given to higher speed transmission. We receive about 350 calls a day and there are about 15,000 files downloaded monthly. The system is available 23 hours a day. Each caller is allotted 60 minutes per call, but you can call as many times a day as you want.

In addition to the documents I described, we also now have news releases, the Commission agenda, and several lists which are available on the system. We have a monthly calendar of events so people can call in and see the activities that are going to take place at the Commission. We have also formed a CIPS user group, where the members of the public come in and exchange ideas with us, you know, tell us their problems, make suggestions.

There were some problems, though, that we did encounter that I would like to share with you. During the test period we only had a few people to test the system. We had no idea when we finally turned it on that there would be such an overwhelming response; so there were some problems that we encountered right after we went online. Also, the staff that was assigned to manage and operate the system didn't have extensive computer backgrounds. It took us a while to have that staff get on-the-job training and the formal training that has really helped the system operate smoothly.

We feel that we've made a very successful system here. The public, I've been told, has stopped sending messengers to the agency, which I'm sure has helped their companies financially. We would like to continue to have the system PC-operated, PC-based right now. We want to continue to have our CIPS user group meetings. We will also make enhancements as needed.

We are now looking at another system at our agency called the Records and Information Management System. We plan to automate that system and provide the public with electronic access to it. Since a lot of the information that's on CIPS will also be on RIMS, CIPS will probably become a subsystem of the new RIMS, but we still plan on providing electronic access to this information to the public. Thank you.

[The prepared statement of Ms. Walters follows:]

Testimony of
Linda R. Walters, Director
Information Management Division
Federal Energy Regulatory Commission

Before the Subcommittee on
Government Information, Justice, and Agriculture
Committee on Government Operations

February 19, 1992

Mr. Chairman and Members of the Subcommittee, I appreciate the opportunity to appear before you to discuss the Federal Energy Regulatory Commission's (FERC) electronic bulletin board system, also known as the Commission Issuance Posting System or "CIPS".

The primary functions of the Commission are to regulate various aspects of the natural gas, electric utility, hydroelectric power and oil pipeline industries. Because these industries requested more timely access to FERC information, the Commission, in the fall of 1987, began looking into better ways to disseminate its information. The Federal Energy Bar Association, in particular, played a key role in requesting that the FERC look into electronic bulletin boards.

The result of these requests is the electronic bulletin board system that the Commission has today.

BACKGROUND

The Commission's public access policy is, and has been, to make information available to the fullest extent possible and as quickly as possible.

The Commission informs the public of its regulatory actions and decisions through the issuance of formal documents. Every work day at 10:00 a.m. and 3:00 p.m., the Commission issues these documents which include proposed, interim, and final rules; initial decisions; opinions; notices and orders. The total number of issuances averages about 75 each day. The official copy, which is the signed paper copy issued by the Office of the Secretary, was traditionally available through the following sources:

- o FERC's Public Reference Room where you can come in person, send a messenger, or write for copies;
- o A subscription service available from an on-site duplicating contractor;
- o FERC's Service List program in which FERC mails documents to companies involved in a particular case;

- The Federal Register where notices and rulemakings are published; and,

- The Federal Energy Guidelines where selected documents are published in the FERC Reports and the FERC Statutes and Regulations.

As you can see from the above list, the Commission offered numerous ways for the public to gain access to its information. These were all paper-based methods with no electronic distribution available. Interested parties located in the Washington area had the advantage of receiving these documents before their competitors located in other parts of the country. As the industries regulated by the Commission began to insist on more timely access to FERC documents, it became apparent that it was time for the Commission to consider disseminating its information electronically.

We began by looking at electronic bulletin boards elsewhere within the government. At the Department of Commerce, we were given a demonstration of their Economic Bulletin Board (EBB). They gave us information on their system's configuration, how they operated their system, and offered their assistance. We then conducted a thorough analysis of bulletin board hardware and software, and selected a configuration similar to the one used by the Department of Commerce at that time. The system was personal computer-based using an off-the-shelf software package called Remote Bulletin Board Software. The start-up cost for the system was approximately $35,000, sufficient to pay for not only the hardware but also for a contractor to customize the software to meet the Commission's needs.

OBJECTIVES

The objectives the Commission expected to achieve were:

- To provide the public immediate access to Commission documents as soon as they were issued;
- To ensure that all members of the public were on equal footing with regard to timely access to Commission issuances by reducing the advantage gained by geographic location; and,
- To reduce the cost and time burden on both staff and the public who either had to physically come to the Commission to obtain documents, send a messenger to pick up the documents, or wait for documents to arrive by mail.

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PLANNING

Planning for the system was made easier by support from top management including at that time, Chairman Martha Hesse, who was 100% behind developing an electronic bulletin board. We were also fortunate because the Commission was in the process of standardizing the hardware and software used by FERC staff. Personal computer based WordPerfect was established as the standard word processing software for the agency. Before standardizing, the Commission had a variety of word processing equipment and software which would have made collecting the information a more difficult process. The documents I have been talking about are created by staff throughout the Commission. Internal procedures were developed for the staff to follow in the preparation of the documents to be posted on the CIPS. It was critical that these procedures be followed to ensure the integrity of the information that formed the database of the system. Coordination between offices within the Commission was required to ensure that documents were posted simultaneously on CIPS, and on the bulletin board in the lobby at headquarters and in the Commission's Public Reference Room. As these procedures were being developed, staff worked with a contractor to customize the software to meet the Commission's needs and to make the system as simple to use as possible. A CIPS User Guide was also prepared that described the functions of the system, the information on the system, and how to access that information.

During the planning process, several decisions were made that had major impact on the operation of the CIPS. They were:

- CIPS would begin as an experiment;
- CIPS would be managed and operated with existing in-house staff;
- The documents on the CIPS would be offered in a standard code to provide widespread accessibility;
- CIPS would have two identical systems - one to act as the host or main system and one to serve as a backup so that users would experience little or no down time;
- CIPS would not be considered an official version of FERC documents. A disclaimer was provided that the Commission would not be responsible for errors or omissions on the CIPS, and that CIPS might not contain every Commission document issued;
- There would be one-way communication only - users could read bulletins and download files. Functions were not provided for users to send messages, receive messages or upload files; and,

- CIPS would be free of charge. This decision was made for several reasons. First, we did not want to discourage users during the developmental period. Second, we did not have staff available to handle a subscription and accounting system that would have been required if we charged. Third, we could not guarantee that CIPS would have all FERC documents posted daily. And last, it was terrific for public relations to offer it free.

This project began in the fall of 1987 and early in 1988 we were ready to test the system. Initial training for the in-house staff that would operate the system began in February 1988. We finalized the internal processing procedures and selected users that would assist in testing the system in March 1988. The test period began with three telephone lines, but interest in the system was so enthusiastic that we expanded to seven lines prior to implementation.

CIPS

The CIPS went public on April 15, 1988. The very next day users called to propose new features and ask that more information be put on the system. Approximately 70% of the documents the Commission issued were available in full text. The system was available 23 hours a day and users were permitted unlimited calls and up to 60 minutes connect time for each call. The information on the system consisted of the formal documents issued daily by the Commission, news releases and the Commission agenda.

It took approximately five months to implement the CIPS. Putting an electronic bulletin board system together is a fairly easy process. However, there are some lessons learned that we share with other agencies when they talk to us about establishing a bulletin board. Obviously you cannot plan enough. Most critical to the success of the CIPS was getting the Commission staff to follow the document processing procedures. The documents the staff creates form the CIPS database. During the planning period we held meetings with individual offices, periodically sent out the procedures and information about CIPS to staff as a reminder, and gave demonstrations of CIPS to staff to show them the impact of not following the procedures.

Other lessons were learned from start-up problems we encountered. The test period results did not prepare us for the overwhelming response. The associated problems of dealing with such an influx of users were not discovered until the system was actually in use. We experienced equipment problems the first year due to the fact that both computers were in use 24 hours a day. We have since purchased new, more powerful personal computers, and alternate their use.

As stated earlier, it was decided at the outset that the CIPS would be managed and operated using existing staff. There were some obstacles to overcome in this area since the on-board staff did not have the computer background necessary to recognize problems or to know how to solve them. On-the-job training and hands-on experience were supplemented by formal training courses to increase staff's knowledge and understanding of the CIPS hardware and software. The same staff is operating the CIPS today. They have gained excellent experience and are very proud of their contribution to the CIPS. Their knowledge and experience are supplemented by the Commission's on-site ADP support contractor who provides technical support as needed.

It costs approximately $40,000 annually for the amortized cost of the original and replacement hardware, software, contractor services, phone lines, and other miscellaneous expenses of CIPS. It also costs approximately $75,000 for labor based on the percentage of staff time necessary for planning, administration and operation of the system.

We want the CIPS to be as useful to the public as possible. We have issued a revised CIPS User Guide; we advertise phone numbers for users to call to discuss problems; and we have formed a User Group to exchange ideas, problems and experiences. We continue to enhance the system based on the needs of the public. Today there are 12 telephone lines, two of them dedicated to higher transmission speeds. CIPS receives approximately 350 calls daily, and approximately 15,000 files are downloaded from the system monthly. Information remains on the system for 30 days, then it is deleted. About 95% of the Commission's documents are available in full text. We have expanded the information on the system to include a list of all filings made at the Commission, a list of all documents issued on a particular day, a list of items acted upon by the Commission at a meeting, and a monthly calendar of Commission events. We developed programs to compress the files on the system to save disk space and reduce transmission time to the user. We have also improved ways for users to identify the issuances they are trying to retrieve.

We measure CIPS' success by the users' enthusiastic response and very favorable comments, by the steady increase in new users and the volume of calls, and by users' requests for new features and added information.

The future of CIPS is to continue to make enhancements as required, to keep it a personal computer-based system as long as possible, and to continue to hold User Group meetings to exchange information. What could change some day is where the CIPS information will reside. The Commission is currently in the process of automating its Records and Information Management

System (RIMS), and the plans include providing the public with electronic access to this system. The RIMS will not only contain the documents issued by the FERC that are now on the CIPS, but also the documents that are received by the FERC.

Thank you for the opportunity to discuss the Commission's electronic bulletin board system. At this time, I will be happy to respond to any questions you may have.

Mr. **Wise**. Thank you very much.

Mr. Brock, you had referred to the Internet as something you wanted to discuss a little more. I might ask whether that could provide an alternate distribution method for some Federal districts?

Mr. **Brock**. I think so. In this case, several years ago, you will recall, we did a report on the Internet virus, at the request of another House committee. We decided at the end of the report we might as well distribute it over Internet because we felt like there was a user group that would have an interest in the report.

The test was wildly successful, so we decided to put another group of reports up on Internet, and again they were very successful. We've had 1,200 requests for the reports over a very short period of time that we know about. We are requesting that people tell us when they request the report. We don't always get that, so we don't know what the actual readership is.

We recently went to Europe on another assignment on high-speed, high-performance networking. Every individual, without fail, that we interviewed over there had read our report and had read it over Internet. We wouldn't have had that sort of access before.

There were some technical problems that we're dealing with now. For example, most people could only download the ASCII files. Some of the richness of our reports, in terms of photographs, charts, and tables were unavailable. We're trying to work out the technical difficulties right now, and those are being reviewed. We hope that once those are settled that we would make reports available on Internet or on other networks as well.

Mr. **Wise**. Does the GAO have a bulletin board presently for its reports, or issue an index of what is available, say, through CD-ROM or floppy disk?

Mr. **Brock**. No, but I believe that we are putting up on a bulletin board-type thing our list of monthly reports. I would like to verify that. I'll get you the accurate information. Some private companies make available the GAO reports on CD-ROM; GAO does not do that.

Mr. **Wise**. I'm interested—Dean Cline, would you be interested in distributing GAO reports or some of them at least if you could get them? Or can you get them, presently?

Ms. **Cline**. I think access to them is very important. Again, given the topography, if you will, of our university, it's important to have access via the Internet and through subnetworks that tie into it, to facilitate user access, to cut down the time of delivery we now face with resources. So, yes, those reports among others, would be an important direction.

Mr. **Wise**. I'm interested because you talked a lot about agriculture and that's another subject area of this subcommittee, so we tend to ask GAO to do a lot of work in that area.

Ms. Walters, I'm curious, how long did it take to get your bulletin board up and running, and what cost was involved?

Ms. **Walters**. It took us approximately 5 months from the time we decided to do a bulletin board, and the initial startup costs were approximately $35,000.

Mr. **Wise**. OK. I assume that it didn't take 3 years of budget planning and committee after committee?

Ms. **Walters**. No, not at all. We listened to some users who wanted this access and a bulletin board was the solution, we felt. Once we decided, it didn't take us long at all.

Mr. **Wise**. Mr. McCandless.

Mr. **McCandless**. Thank you. Mr. Brock, you talked a lot about the agricultural aspect of this and using that as an example to call in and get information. The USDA could recover its cost within a 2-year period. How are the users of this charged for the service?

Mr. **Brock**. They're not charged.

Ms. **Wright**. When they call in it only costs them the cost of the phone call.

Mr. **Brock**. Yes. The users charge would only be their cost of the phone call. Depending on the time of day they call and the distance, that would be their only charge.

Mr. **McCandless**. Let's draw a comparison between the providing of this material in a conventional way through the mailing of it. Have you done anything in the way of a review of man hours to handle comparable materials in the two categories?

Mr. **Brock**. I believe we do have some information on that. Would you like to answer that?

Ms. **Wright**. We haven't verified the cost savings for these, but according to the agency, they will recover their costs in a couple of years based on that versus mailing the compilations of news releases.

Mr. **McCandless**. Now let me ask you the $64,000 question: Can you do more with less people?

Mr. **Brock**. They are in that case. Although, I guess they were contract people; they eliminated their daily messenger service. The more critical news releases were being delivered not by mail but by messenger service. And as I understand it, they virtually eliminated the messenger service.

Mr. **McCandless**. Is your perspective that you can offer more for less or is that a false assumption?

Mr. **Brock**. I think in this case they are offering more for less. They're targeting customers that they weren't reaching as effectively before, and I think that's the key to this particular activity. It's not that it's a substitute necessarily for the old way of doing it but it's an enhancement that provides some value to the customer in this case.

I think many agencies don't do a very good job of identifying customer needs and ways of meeting those. And the ways that we talked about today are all relatively low cost and, many times in many examples, much lower cost than the old ways of delivering the information and they give a lot more utility to the user.

Mr. **McCandless**. Dean Cline, I detected a Penn State smile.

Ms. **Cline**. You sound like my president.

Mr. **McCandless**. Would you care to comment on that?

Ms. **Cline**. It's a very important question and we're asking it of ourselves all the time. We're doing more; that we know. We never before had the level of inquiry that we're now providing answers to through these electronic resources.

I'm not sure I would go into a budget hearing and say, "We will do more with less or with fewer people," simply because what we find is that the user's expectations are continually growing. And as more users are empowered with the use of a computer in their own work setting or, for students, the increasing number of students who come to campus with their own computers, this just simply adds more demand.

We think that's a positive factor in terms of our business being one of education. We don't want to turn that demand aside. But it's always a management balance that we look for. I think it would be a very difficult argument to say that we are going to do a lot more and it isn't going to cost us a lot more. We've got to strike balances that are very effective for users as well as for the organization.

Mr. McCandless. You can help me out here as one who is just getting used to an electric typewriter. I'm a student and I've been assigned a subject, the Civil War and reconstruction, a term paper. During the covered wagon days when I was in school, you went to the library and did your thing.

Is the library now capable of providing through a personal computer or some other source the research material if the individual has the knowledge of how to work the system?

Ms. Cline. Right now a lot of it is providing access that helps you identify what you need. And you still do need the physical artifact, the book or the journal, in many cases, to fulfill your research.

Mr. McCandless. It replaces the card file system?

Ms. Cline. It replaces the indexing, the card file system, and some of the other reference tools which we once had to count on coming to our libraries in printed format. So it has increased the efficiency and, in some cases, it has excited students to use more resources than they would ever before have approached.

The text delivery and the image delivery systems are evolving. The North Carolina State project that I mentioned in my statement does result in the actual delivery of electronic text and image to the user's work station. And one of the research issues under way now is to make certain that the image will come through in a manner that is usable for those who are conducting high level research.

Mr. McCandless. Ms. Walters, we talked about your availability was 23 hours a day?

Ms. Walters. Yes.

Mr. McCandless. Have you found there to be an additional cost by this elongated service?

Ms. Walters. No, not at all, not from the agency standpoint because the machine just stays on and people can access it; you don't have to have staff there.

Mr. McCandless. One more question here: As I understand it, we have a multitude of different kinds of communication devices depending upon which bureau, department, or agency in the Federal Government is involved, Mr. Brock. Is there an attempt to move in a direction of standardization of some of these components so that agency A can talk with bureau B without going through C, D, and E?

Mr. Brock. For the bulletin boards and things that we're talking about, most of them use common standards that are primarily available in the public switched network, using ATT or MCI or whatever switch voice service you would use. In terms of large scale data transfer between agencies, sometimes that is a problem if there are different protocols and there is no standar d. The government is moving toward standards in networking and in telecommunications. They're not in practice at every agency right now though.

Mr. McCANDLESS. Thank you. Thank you very much.

Mr. WISE. Dean Cline, I would just like to check with you and ask whether you have any difficulties in getting the information that you need from Federal agencies in electronic formats. Are you able to get it in a timely manner?

Ms. CLINE. Specific to PENpages or in general?

Mr. WISE. PENpages, I'm sorry.

Ms. CLINE. I think the PENpages relationship is a very effective one. It has been in place and is working in a productive way. I would like to hope that some of the other agencies will become as easy to work with as we expand this concept and apply to other disciplines in the university context.

Mr. WISE. I appreciate the subcommittee has some limited experience with this in that we've set up a whistleblower bulletin board in which I believe at this time we've gotten over 700 responses to it. And, in fact, the number is growing. That's done basically with a computer and a modem, a very simple operation, but I think that it offers a lot of promise. We're referring out everything that comes in to the subcommittees of appropriate jurisdiction on Government Operations.

We thank you very much for your presentations.

The next panel will be Robert Simons, general counsel for the DIALOG Information Services, Inc., from Palo Alto, CA; Paul P. Massa, president from the Congressional Information Service, Inc., from Bethesda; and Gail S. Dykstra, senior director of policy and programs with the Canadian Legal Information Centre in Toronto, Canada.

If I could ask the panel, if you have no objections to being sworn, if you would stand and raise your right hand.

[Witnesses sworn.]

Mr. WISE. It's good to have you here. I know that some of you have come a long way to be here. Mr. Massa, it's always a pleasure to have you with the subcommittee again.

Mr. MASSA. Thank you.

Mr. WISE. Why don't we start with Mr. Simons. And, as I explained to the previous panel, your written statement in its entirety is already made a part of the record of the committee.

STATEMENT OF ROBERT A. SIMONS, GENERAL COUNSEL, DIALOG INFORMATION SERVICES, INC., PALO ALTO, CA

Mr. SIMONS. Thank you, Mr. Chairman and good morning. It's a pleasure to be here this morning and particularly to speak not only to the subcommittee but also to commend the Chair while we have this opportunity for your leadership role on these important issues and public stand and record on H.R. 534. It's certainly a privilege to be here.

My name is Bob Simons and I am general counsel of DIALOG Information Services. In a brief summary, DIALOG is one of the oldest and largest of the so-called online data banks in the information industry. We went into business in 1972 and the industry is only about 20 years old at this point.

We're very pleased to say that our very first so-called online file that was available for public access and searching was a file derived from Federal data, the ERIC data base, the education research data base; that still remains as file No. 1 on the DIALOG service and it's something which we're quite proud of.

I want to mention a little bit today about where we are going as an industry vis-a-vis government information, how we collect it, how we obtain it, and how we disseminate it so as to enlighten you a little bit, particularly on the government and private sector relationship, how that has worked, and also some threats to that relationship.

I would first start out by indicating that at the very outset of the industry those of us in the online business had a great interest in Federal data. What we found some years later is that the interest doesn't just stop at the borders of the United States. To the contrary, there is a worldwide interest in information and information is becoming an important item in international commerce. It seems as if the whole world is interested in what the United States is publishing and the research reports of the Federal Government as well as privately published information.

I'm pleased to say that of all the handful of industries that we have in this country that show a positive balance of trade, it's my view that the information industry does indeed show a positive balance of trade and that includes, Mr. Chairman, the Japanese. We do sell more to the Japanese than they sell back to us, at least insofar as information is concerned.

One of the relationships that began in the early days was that with the National Technical Information Service, or NTIS. NTIS took a role as a licensing agency, if you will, on behalf of other Government agencies. And we've dealt with them for many, many years to obtain Federal data and to make that data accessible and searchable to the public.

What we've been concerned about the last few years is an ever increasing spiral of cost that we've seen to obtain Federal data. Not that there have been improvements in the data or in the mechanisms that we've received but rather just increased cost.

One of the concerns that I've had is that for the later period of the 1980's, that is 1985 through 1989, we saw that the cost for obtaining the NTIS data base increased threefold without any value added by NTIS itself. And it was unfortunate that by the time the decade was over the cost to us to obtain the data was frankly equivalent if not slightly in excess of the cost that we provided to the public just 5 years earlier.

So a threefold increase in cost was of great concern to us and naturally, we had to pass the cost on which made the access more expensive. We would like to not have to do that. We still believe that access to Federal data should be the most cost effective, and generally it is. In our service, Federal data is certainly the least expensive information available for public access. And we would certainly like to keep it this way. But one of the threats that we're concerned about is the ever-increasing cost that we're being faced with.

I would also point out that in respect of the first panel here this morning that we, too, are seeing quite an interest in transportable information such as that used on CD-ROM. It is becoming a popular medium in schools, in home, and work. DIALOG has had a long history of attempting to cooperate with our educational institutions by training young students in the techniques of online searching. We've helped our academic institutions instruct hundreds of thousands of students over the years. We continue to do that. And we also see now a great interest in finding both Federal and privately published data on CD-ROMs as well.

One of the advantages of a CD-ROM, particularly when used in conjunction with an online service, is that, like a book, a CD-ROM becomes frozen at the point in time it is mastered. And many people are, of course, interested in the more current data, particularly when they're dealing with issues of Federal importance and Federal statistics.

One of the advantages of the CD-ROM medium, particularly in conjunction with the online media, is that a searcher at his own convenience with a fixed-cost type of medium, CD-ROM, can do the search on historical data. And then if they're a subscriber to the online system they can also connect to the online system, limit their search to just the information which has been updated online subsequent to the publication of the CD-ROM, and actually create a very comprehensive search for a very, very reasonable cost. And that's very, very advantageous to the user.

One of the things that the public sector does in terms of correlating and providing data is that there's been a history of a strong relationship which I think is based on some key principles here in this country, not the least of which of course is the first amendment which encourages writing and speech. Other Federal statutes and policies such as the Freedom of Information Act and the Copyright Act also encourage works of authorship.

And what we've seen is that there's been an explosion such that we now call ourselves in the information age, and I think that's certainly true. And I think it's certainly going to extend into the next century for sure.

In our industry, we note that unlike other industries that are certainly suffering from the recession right now, we continue to create jobs. We continue to invent new computer applications which correlate the advantages of computers and computer technology with information science. And we've created a generally competitive and vital marketplace for information on a worldwide basis.

There tend to be some threats, however, to it other than just increased costs. And I want to point out a few of those by way of my summary comments this morning. And then I will certainly be available for questions.

In addition to the concern over increased cost, we also have to express some concerns over potential government competition with the private sector. As we've heard earlier and it is true that it is becoming less expensive to capsulize data on smaller media and to disseminate such date, we have to be careful that we don't put the

Federal Government in direct competition with the private sector for several reasons.

One is that that private sector has great expertise in adding value to data. There are very few users who want the same thing at the same time in the same way. They all seem to want their information packaged to meet their needs. And one of the things the private sector is very adept at doing is in creating products and services that meet the demand needs of the marketplace and to invest its own money rather than taxpayer funds to see what works and what doesn't.

I'm very pleased to report to you that just within the past several weeks, DIALOG, we've just announced a new CD-ROM covering the Federal Register. And we will be able to publish on one disk a full year's worth of the Federal Register publication. And that's a very exciting proposition for us.

The ways that on can search and some of the value added—I'll give some examples. What we were capable of doing with the raw data that we get from the Federal Government is, through our software engineers and our information specialists, we create means by which users can access the data in a variety of ways to meet their specific needs, which is unique and different amongst all users.

For example, we can provide people with the ability to search a data disk by word index, that is, by every word in the document; by the issuing agency, such as the Food and Drug Administration; by title words; by citation; by a CFR section that may be affected; by a document type, for example whether it's a Presidential document; or even by publication type.

Going back to Mr. McCandless' point of the card index, I too recall from my days in school having to do research through card indexes. And I recall how laborious it was and how one had to be pretty clever to think of all the ways in which one might try to seek or identify information.

Today, the same indexes are available through computer command modes and also through menus, which are becoming very, very popular in the information world. And I think at this point it's going to be not too many years when one will need hardly if any kind of advanced training at all to be able to just load any disk and then search it and find what one needs by way of information, whether one is doing research for school or for one's business, or for one's own home and family.

I want to mention one other aspect of potential threat from the Government and then conclude my remarks. And that is that we've talked about concern over some increased costs that have been occurring as of late, also a potential for Government competition particularly if the playing field is not level.

And also there are more recent threats, as the chairman I know is aware, of the government imposing downstream controls not only on the data product itself but both direct and indirect types of controls through attempts to tariff user's access to data and also to try to control price and to maybe even go into direct competition with the private sector by requiring customer lists and user identities as such that the agency, itself, should it decide to get into the retail business, can basically step right over the private sector's investment and reach the end user.

It's certainly our view that the Government does fulfill its proper role by collecting and disseminating information in a variety of ways. The private sector, of course, and the public have benefited from that. But by the same token, we want to be careful that the Government doesn't decide to get into the retail business such that it removes all of the incentives from the private sector.

When the Government needs automobiles it doesn't open up a showroom and a repair shop down the street from General Motors, Chrysler, and Ford dealerships. It goes out to the private sector to secure vehicles. And I would certainly like to maintain the kinds of historical relationships that have existed between those public sector agencies who provide data to the private sector such that the private sector can make its investments in cooperation with the public sector and provide the best access to the public that's available.

[The prepared statement of Mr. Simons follows:]

For Immediate Release

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Statement of

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Before The

Government Information, Justice, and Agriculture
Subcommittee
of the
Committee on Government Operations
House of Representatives

on

Creative Ways of Using and Disseminating
Federal Information

Wednesday, February 19, 1992

Outline

1. The United States has a strong history of encouragement of authorship and publication. The First Amendment, the ban on government copyright and F.O.I.A. have contributed to healthy commerce in written works.

2. The United States holds a worldwide leadership position in electronic publishing and pioneered information science and technology.

3. The U.S. information industry has had an excellent historical relationship with the federal government respecting access to and dissemination of government data.

4. Users of information services and produces have a wide variety of choices in a generally competitive industry, where government and private sector information is offered to meet many different needs. Private sector investment (and government policies which encourage such investment) has resulted in an industry which tailors its services and products to meet a variety of unique needs. Without private sector investment, the choices would be reduced and there would be less public access to data. In extreme cases, some government data might not otherwise be available.

5. Threats to the information industry include increased government fees, threat of government competition, attempts to control distribution channels and government initiatives aimed not at collecting and making available government information but at determining what value-added is appropriate for the user. Such "editorial" decisions should not be the role of the government in our society.

Mr. Chairman and Members of the Subcommittee:

Introduction

Good morning. My name is Robert A. Simons and I represent DIALOG Information Services, Inc. Let me begin by thanking you for the opportunity to testify today on the subject of creative ways of using and disseminating federal information. As you no doubt are aware, the United States has a robust and competitive information industry. In my testimony today, I will touch upon several themes which will help explain: (1) why this industry has achieved success; (2) how the private sector, in conjunction with the federal government, has been innovative in using and disseminating federal information; and, (3) what the benefits are to the public. I will discuss several specific examples of creative uses of federal information. Finally, I will touch upon several factors which pose possible threats to our industry and will explain why these factors necessitate the attention and oversight of this Subcommittee if effective public access to federal information is to be preserved.

By way of background, I am General Counsel of DIALOG Information Services, Inc., located in Palo Alto, California (the heart of Silicon Valley). DIALOG and its founder, Dr. Roger K. Summit, were pioneers in the development of information search and retrieval technologies during the 1960's. In essence, computerized information storage and retrieval is a technology which utilizes the storage and access capabilities of computers and combines such capabilities with the creative genius of software engineers to develop systems permitting large collections of information (in machine-readable form) to be accessed and searched in various ways. Through utilization of data networks, the searcher can be far away from the information collection, yet perform a search and retrieve data output as if he/she were physically purusing a card collection. In fact, information retrieval permits a searcher to be much more effective in his/her search than otherwise would be the case in a manual search, because the searcher can define the key word or words, combination of terms, or other parameters of the search in ways which cannot be achieved through manual search techniques.

DIALOG is one of the oldest companies [1] in the computerized search and retrieval industry and is known as having the largest collection of online information available for remote access by customers anywhere in the world. We currently have about 425 databases available online and we offer our services to users located in about 100 countries around the world. Our databases, both online and on CD-ROM,[2] reflect information collections from private sector publishers in all fields (such as business and news), from not-for-profit scientific and technical societies (such as biology and engineering) and from government agencies, both here and abroad. These collections include large indexes, full-text data sources and even images (such as patent drawings and trademark logos). Our customers have traditionally consisted of information professionals in industry, academia and government; however we are seeing an increase in the number of individuals who have an interest in searching databases from their offices and their homes. Finally, DIALOG is an active partner with our nation's academic institutions, cooperating in classroom instruction of our nation's youth so that our future workers will have the research skills necessary to compete in the 21st Century.

DIALOG has been and continues to be a leader in utilizing federal information to create information products and services. In fact, our very first database offered for public access in 1972 was the complete database on educational materials corresponding to the print indexes Resources in Education and Current Index to Journals in Education provided by the U.S. Department of Education and the Educational Resources Information Center. This database, known as ERIC, covers research reports and periodicals of interest to the education profession from 1966 to the present and contains almost three-quarters of a million records. This was designated as DIALOG File #1 and continues to be File #1 on the DIALOG Service.

Before highlighting specific products and value-added components, it is important to note that the breadth of federal information available from DIALOG is phenominal. This collection reflects both the breadth of data available to us from the federal government, as well as the diverse information needs of our customers, irrespective of their profession, location and intended use of the information. In addition to educational data, our databases include such diverse collections of federal information as the GPO monthly catalog, U.S. Copyrights and trademarks, NTIS and D.O.E. databases and Federal Register. In fact, I am pleased to information you that DIALOG has just released a new CD-ROM product containing the Federal Register. Each compact disc contains a full year of publication.

Let me turn now to the specific questions posed to me by the Chairman in my invitation to appear today.

Information Collection, Adding Value and Dissemination

There are a variety of methodologies used to collect and disseminate data in the relationships which exist between federal agencies and the private sector. In some cases, a federal agency has a mandated obligation to collect data within a certain field or area of interest. Examples include the Copyright Office, the Patent and Trademark Office, the National Library of Medicine, the Library of Congress and the Department of Energy. In other cases, an agency will work with a third party to convert its data collection into machine-readable form and to help disseminate the data to the private sector. An example is the U.S. Department of Education and the Educational Resources Information Center (the ERIC database mentioned above). In still other cases, a federal agency may cooperate with a second federal agency to disseminate a data collection to the private sector. An example is the Department of Energy (D.O.E.) database which is disseminated through the National Technical Information Service (NTIS) acting in the capacity of a licensing agent. Finally, some federal data collections are acquired directly from an agency by an information disseminator such as DIALOG, whereas other data collections are acquired by publishers or contractors who add their own value before providing the collections to DIALOG. Thus, there is no one method by which DIALOG collects federal information. To the contrary, the myriad ways which exist are generally quite satisfactory and often involve choices relating to such factors as quality, breadth of coverage, timeliness and cost. It is our view that no single method of data sourcing need be imposed on the industry and I will explain this view further in a few moments.

DIALOG's receipt of the massive and raw information collection is just the beginning of the dissemination process and I will now touch upon the value-added elements of our industry. The first step in preparing a data collection or information retrieval activity is the conversion of the collection from a raw collection to a searchable "file." This conversion is accomplished through the processing of the data collection with proprietary software programs intended to identify those features necessary to permit seaching through a variety of methods and means. Usually a card index is sorted into several collections which, while permitting manual searches from several different perspectives, are limited. Such indexes may include journal or article title, topic and author. A computerized search, however, can provide many more search capabilities, limited only by the creative genius of software engineers and the logical requirements of those cusotmers who search the collections. Thus, in addition to the traditional access sorts supporting a search by title, topic and/or author, a typical DIALOG searcher might desire to search by key words or grouping of words, by date or date boundaries, by source of data, by document type, by publication type, by document or citation number or other identifier or even by geographical identification. Additionally, whereas an information professional might prefer to search a database utilizing a powerful command search system where the searcher has developed years of experience and sophistication, another searcher might desire to access the same database via a simplified menu system (not totally unlike transacting banking services via an automated teller terminal).

DIALOG's value-added doesn't stop with its treatment of the data collection. To the contrary, we offer a full range of services and products to our subscribers to meet their unique information needs. Examples include a full array of training classes covering the basic or advanced elements of online search and retrieval techniques, documentation explaining each database or unique collection of information (i.e., its contents, controlled vocabulary, sample of searches and examples of data output), a phone center or hotline where searchers can call us via a toll-free telephone number to seek help with their searching requirements, multifile and crossfile search features where a single search can be executed against a collection of databases (both government and non-government) to provide a comprehensive result, and even automated searches performed offline when a database is updated and to the pre-defined specifications of the searcher with the output or results being mailed or sent via electronic mail to the subscriber.

It is clear to us and, I submit, to every professional who either works in the information industry or who utilizes the benefits of information retrieval technologies that no single method or design of search capability will satisfy everyone. To the contrary, our subscribers have a variety of requirments and each subscriber's preference is important. In fact, I would contend that our subscribers' information needs are as varied as are their requirements to achieve access to and retrieval of the information. This helps to ensure a continuation of technological improvements in the information search and delivery process, in the quality of search system features and in the evolving market for information services and products. The result of this evolution (or, perhaps, revolution is the better term) is a robust and competitive industry in which the United States is the recognized worldwide leader in the provision of information services and products. In an era where government and industry leaders alike voice concerns over the erosion of technological and market leadership respecting U.S. industries and commerce, the information industry is one of the few global industries where cooperation between the public and private sectors has contributed to U.S. leadership. Although I cannot disclose to you the specific amount of sales of DIALOG information products and services to Japan, I can tell you that we sell a significant amount to subscribers in Japan. I am of the firm belief that the U.S. information industry is a net exporter of information products and services to Japan and that, accordingly, ours is one of the few industries remaining in the U.S. where we have a positive and favorable balance of trade with Japan.

Permit me to emphasize why it is, in my opinion, that we have a robust information industry in the U.S., one in which we are the world leader in both technology and products. I submit that there are a variety of reasons, including the following:

- A strong First Amendment, which has encouraged research and publishing;
- Effective federal legislation, such as The Freedom of Information Act and a ban on copyright in federal works, which encourages authorship;
- A tradition of private sector investment and risk-taking in information technology, products and services;
- A tradition of educational emphasis in the field of library science;
- A tradition of federal government involvement in collecting data in various fields, where repositories have been developed in virtually all fields of interest;
- A tradition of cooperative efforts between the public and private sectors where the public sector has emphasized its role of collecting data and where the private sector has emphasized its role of using such data to create value-added products and services to meet the needs of various markets and users;
- A tradition of non-interference on the part of government, which has permitted private sector entrepreneurs to invest in information-related technologies and to create a myriad of data products and services; and,
- A tradition of close working relationships between professional librarians and industry leaders.

I would like to be able to state that the future of the U.S. information industry is every bit as bright as its 20-year history; however, I would be remiss if I didn't identify several threats to the industry's viability.

Threats to the Information Industry

During the past decade, we have witnessed a variety of activities within the federal government which may, in certain cases, reflect a trend likely to upset and change those cooperative relationships and efforts which have helped to create a viable and healthy industry in the U.S. Permit me to identify several of those activities and/or trends which pose the most immediate dangers:

1. Increased Fees Charged By Federal Agencies

In many cases where the private sector acquires raw data from a federal agency, the agency has greatly increased its fees for such data and/or has introduced a fee schema not unlike a royalty arrangement preferred by a private publisher. Most often, the increased fees do not reflect increases costs of data collection; rather, they reflect a need to increase agency revenues and to subsidize other non-sustaining activities in an era of limited resources.

An example is that of NTIS, who acts as a licensing agent for its own information collections and for collections of other agencies (e.g. Department of Energy). NTIS' user fees increased threefold in the period from 1985 to 1989 and not because of increased costs of data collection. This, in turn, necessitated that DIALOG increase it susbcriber prices for access to this data and, of course, the end result is less usage. Today, NTIS receives more dollars from DIALOG, but this is due to the increased user fees, not increased usage by the public. NTIS officials privately admit that they are being pressured to increase revenues and to subsidize information collections that are a revenue drain on the agency.

Despite the problems of decreasing usage of NTIS data by the public due to an escalating price cycle, NTIS has also attempted to introduce a form of contract that is a virtual clone of a non-governmental copyright/royalty contract. Explained on the basis of an intent to move away from the collection of user fees based on connect time (i.e., the time during which a user is actually connected to the database during a search), the proposed new contract is a guise to introduce new and untried elements of charging for DIALOG's value-added features wholly unrelated to NTIS' data or collection efforts. In fact, NTIS' own employees don't understand many of the clauses of this proposed new contract and cannot explain why they are attempting to collect user fees when a searcher isn't even connected to the NTIS database. In my opinion, the introduction of a radically new contract containing obscure and onerous fee requirements will continue the trend of higher costs for the raw data and, in turn, will act to decrease usage of the information product as the prices charged to users must necessarily reflect the increased fees and administrative requirements.

I submit that federal information should be made available to value-added information providers such as DIALOG for a fixed fee which reflects the marginal cost of transferring the data to magnetic tape, without any element of subsidization of other data collections and without any royalty-type usage fees. A low cost will permit the dissemination of value-added information products and services in a competitive environment, whether online or on tangible media such as CD-ROM. Federal information remains the least expensive collection of data available from DIALOG; however, we want to maintain low prices for these products and services and increase the number of users. This goal is in jeopardy due to endless cost increases and the above-mentioned new and onerous contract proposed by NTIS. The Department of Commerce is presently studying the entire operation of NTIS. We hope for improvements soon and we invite those in charge to meet with representatives of the private sector to discuss possible improvements to NTIS operations.

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2. Threat of Government Competition

At the outset, I described an excellent historical relationship wherein the government performs its role of collecting information and the private sector performs its role of investing in value-added products and services and in disseminating various products and services to the many information users in government, academia and industry, as well as the emerging market of individual users at home and in their workplaces. Because of the very success of this public sector-private-sector partnership in the creation and dissemination of information products and services, some federal agencies are experimenting with their own creation of information products and services for direct sale to the public. This is a threatening and undesirable trend for many reasons:

a) Since a federal agency can easily subsidize the creation of information products and services, there is no way in which the private sector can compete on a level playing field. This will foster decreasing investments by the private sector and will result in fewer products at higher prices;

b) The government should not be the primary source for satisfying information needs of the public. As indicated earlier, the needs of the public are varied and not one or even two products can satisfy such varied needs. If private sector firms leave the market, the public will have fewer information product sources;

c) There is a real danger of creating information monopolies within the federal government. To the extent that the private sector has had its incentives removed, the primary disseminator of data will be the federal government. Thus, the collector of the data will control the distribution channel, as well. If the primary (or even worse, sole) source of federal information is the federal government, we will lose the underlying system of checks and balances that permits and fosters debate, commentary and criticism. This would be the equivalent to an elimination of all privately owned newspapers in favor of a single federal news agency and newspaper. The problem is obvious;

d) Product creation and marketing are not the roles of the government in our society. In one of the few industries where there has been a tradition of a cooperative and beneficial relationships between the public and private sectors, the elimination of incentives to the private sector will drastically change the role of government in our society. Instead of collecting information as mandated by elected officials, there will be a significant risk that data products will be slanted to meet the objectives of certain officials and, of course, this will be done at taxpayer expense; and

e) There is an increased risk that too much power and control over information and information dissemination will rest in the hands of too few individuals. When such persons either leave the government or move on to other jobs within the government, there may be no key person left to monitor whether or not the public actually receives the benefits to which it was entitled. An example is that of the national Science Foundation (NSFG), where approximately $25 Million was funded to a non-government recipient[5] in the 1960s and 1970s in order to foster creation of a machine-readable scientific database for the public's benefit. The NSF is now considering whether to enforce certain provisions of the funding contract which was specifically negotiated to protect the public's interest in having wide dissemination of the resulting data.

Another current example is that of the implementation of the National Research and Education Network (NREN). DIALOG had been urged by its academic customers to permit access through the INTERNET network and DIALOG had signed up with the sole contractor for such access. Despite DIALOG's efforts, our academic users were still generally barred[6] from accessing DIALOG services for almost two months, even where the user and intended usage of such services was clearly and unambiguously related to research and educational purposes.

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3. Threat of Downstream Controls

Perhaps the most recent area of concern is that associated with attempted controls (whether direct or indirect) over the distribution of government information. Congressman Wise is to be commended on his leadership and on his public record concerning H. R.534. Access to information is not only the user's right respecting a choice of interface and features, it is the user's right. Government interference in the distribution of information discourages investments in the private sector, which in time reduces choice and/or increases price, or both. Excessive tariffs imposed on access to government data do not encourage use of such data.

I have attached a paper published by the Information Industry Association, which explores in great detail "access principles" respecting government information. Although prepared in respect of troublesome initiatives at the state and local government level, it addresses concepts which apply equally to federal policies.

Loss of Industry Leadership

As expressed throughout, information is a valuable resource. In a market which is increasingly global and which poses new challenges as we head toward the 21st Century, those who have access to information and know how to integrate same within their business, research interests, educational curricula or even personal lives will likely be more successful than those who do not. As a nation, we cannot turn yet another technology and industry over to foreign competition.

In order to maintain a leadership role in information science and technology and products/services, the federal government should nurture the private sector and acknowledge the private sector's success in creating a global marketplace for American information products and services. This is an industry which was created by the private sector and which has been responsive to the public's information needs, whether the information sought is from a federal or private source. We should do all we can to continue to create incentives for the private sector to expand the frontiers of information science and technology and to compete effectively throughout the world. Indeed, there is increased competition from Japan and Europe. Yet, the U.S. information industry can maintain its global leadership if the U.S. government's role is focused on being to be supportive to industry and not threatening.

CONCLUSION

The U.S. information industry is a viable, non-polluting, ethical and important economic resource which is the envy of the world. The policies embodied within OMB Circulars A-76 and A-130, which policies encourage government - private sector cooperation, have been an important factor in encouraging investment and innovation.

We should not make the same mistakes as we have with other industries, the result of which has been loss of jobs and, in some cases, loss of an industry to foreign interests. Rather, we should foster policies now which are farsighted and which acknowledge a cooperative and non-competitive relationship between the government and the private sector. There is no need for the U.S. Patent and Trademark Office[7] or the National Library of Medicine,[8] for example, to use taxpayer monies in an experiment to create products and services which compete with those of the private sector and which will surely cause private sector firms to leave the industry. On the other hand, there is a need to emphasize the most appropriate role of the government in collecting the data and in making it available to value-added disseminators such as DIALOG so that the industry can prosper and information users can continue to enjoy the benefits of new information products and services in a competitive environment.

Although it is a privilege and honor to be invited to testify on this important subject today, I hope that a similar invitation will not be offered to me a decade from now where I might be invited to give testimony on the subject of "what went wrong."

Thank you and permit me to offer my continuing availability to yourselves and to members of your staffs in the future on this important subject.

FOOTNOTES

1. "Oldest company" is relative to the industry, per se, which has a common birthdate of 1972; thus, the industry is deemed to be only about twenty years old.

2. CD-ROM (compact disc-read only memory) or optical disc is the same medium used in sound recordings. This medium permits users to access thousands of pages of reference material for, typically, a fixed annual fee or "subscription" basis. The DIALOG ONDISC^{R} family of CD-ROM products is engineered so as to permit users to access the DIALOG online service as part of a comprehensive CD-ROM search. In this way the user can integrate his/her search between the CD-ROM medium in the user's possession and the online service which will frequently contain more current data. The online search is limited to data updated subsequent to the update date of the CD-ROM. Thus, the search is economically efficient, as well as comprehensive.

3. A recent article disclosed that there are six (6) current commerical versions of the MEDLINE database available for license to the public. Quoting from the article: "Although each product's data are basically the same, the methods for accessing the data differ widely. In addition, each product adds certain extras to distinguish it from the others. Without going into extensive detail, these extras can include better user interfaces, indexing of local journal holdings, seamless access to online systems, tutorials and manuals on disc. This variety insures that most users will find a product to suit their individual preferences and needs." King, Alan. "Take Two Discs And Call Me In The Morning: A Look At Medical Databases On CD-ROM." CD-ROM Report. DATABASE. Volume 15 - Number 1 (February 1992): p. 86.

4. It is noted that not all information products and services have been instantly successful. to the contrary, some so-called video-text services have failed to capture a market. On the other hand, a host of new services that appeal to individuals (i.e., Prodigy, CompuServe) are successful in creating awareness of database collections and are likely to foster increased usage of online and other information-related services among individuals in the future.

5. This is NSF contract No. C656. Specific clauses were negotiated so as to guarantee that the recipient of funds would not be able to obtain a monopoly of data and of data distribution; however, through lack of enforcement of this contract by NSF officials, the undesirable results have become the status quo. The question of whether or not to enforce the public's rights respecting this contract is currently under review by the NSF.

6. An examination of why such barriers exist and who controls access, particularly at NSF, is beyond the scope of this Hearing. However, the author understands that this subject is of great interest to academic users of INTERNET and that there exists considerable controversy expressed in bulletin board discussions on subject. Some observers contend that DIALOG is being deliberately discriminated against by virtue of its corporate status and for reasons wholly unrelated to the data of interest to potential users for research and educational programs.

7. B. Huther, Assistant commissioner for Financing and Planning, USPTO, gave a paper at the European Patent Office (EPO) Information User Meeting '91 wherein, despite addressing the desirable notion of avoidance of competition with the private sector, it is evident that the USPTO's policy guidelines are directed toward the creation of patent data with the private sector. In fact, in some cases, the USPTO may desire to vend products and services (e.g. abstracts of Japanese policy in English language) which won't be available to the private sector. In essence, this report on developments at the USPTO is a business plan geared at eliminating the private sector competition with the USPTO.

8. See the attached "situation report" which illustrates how NLM has attempted to disadvantage the private sector in a competitive, international request for information concerning a potential educational use of the MEDLINE database. When requested to consider a "flat rate" pricing schema, the NLM would only consider such schema if the data access method was limited to the NLM's own data service.

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Medline - Situation Report - December 1991

Earlier this year CHEST, advised by the Medical Datasets Working Group (MDWG), issued an RFI (Request for Information) to a number of possible suppliers. This RFI asked suppliers how they could provide a Medline service, at a fixed price, to all the staff and students at a participating institution, ie either a "BIDS type " service or an alternative that would meet the same objectives. Suppliers in this context are both universities and commercial suppliers. In parallel CHEST were negotiating the data licence agreement with NLM - a process that had started back in October 1990. However, the RFI responses (13 of them in total) have not yet been through a selection process as discussions on licencing ran into problems when CHEST again met NLM staff in Washington in October 1991.

These discussions with the (NLM) National Library of Medicine in October 1991 gave rise to 3 unexpected problems:

(i) NLM stated that the consortia provisions in their pricing policy applied only within the USA. This is not stated in the pricing policy. The consortia provisions are important because they provide for fixed institution pricing.

(ii) NLM stated that the only flat rate annual pricing they would consider outside the US and outside the pricing policy was on an experimental, rather than service, basis.

(iii) The only implementation of (ii) above that the NLM would consider was with use of their own NLM central computer system, accessed via Internet, using "Grateful Med" on PCs at the user end, and with the British Library acting as their UK agent.

These 3 problems created an impasse. The whole ethos of the CHEST initiative for Medline was fixed annual site charges and free end user access - the same objectives as for the ISI service. The NLM themselves did not respond to the RFI (they were invited to do so) and their UK agents, the British Library put forward a different solution to the one in (iii) above.

Since their October meeting with NLM, CHEST have been in frequent correspondence with the NLM, both to suggest ways in which the NLM pricing policy could be interpreted for the UK requirement, and to urge speed in decision making as any capital finance is unlikely to be available if the process is delayed into the next financial year (i.e. into 1992-93). Delay past March in any case would mean it would be

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difficult to get a service started within this academic year.

There are some glimmers of hope at the end of the tunnel however. CHEST now understands that one of the consortia options has been established (apparently after more than a years discussion) at the University of Toronto - which is, of course, outside the USA. CHEST is in the process of ascertaining details of this and establishing with NLM that this overturns their previous (verbal) policy that consortia were not permitted outside the USA, particularly as this was not done in conjunction with the Canadian NLM agent. Additionally, contacts within the British Library have taken up these issues with a result that the Director of the NLM has indicated that he will get involved in discussions himself. CHEST, therefore, feels a lot more confident that an agreement on flat rate pricing could be established, and a further meeting with the NLM is likely in January 1992.

It does seem, however, that one problem could still remain - the NLM might still insist the only service be by using their own system (as in iii above). This would conflict with the whole RFI approach and the freedom of the community to select the means of supply that would most cost effectively meet their needs.

At the moment, selection of the RFI responses is on "hold". CHEST expects a meeting with NLM in January in Washington. It is clear that the NLM expect the British Library to also be at that meeting.

The BMA has expressed very considerable interest in the project and has backed this up with practical offers of assistance.

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ACCESS PRINCIPLES FOR STATE AND LOCAL GOVERNMENT INFORMATION: AN ANALYSIS

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ACCESS PRINCIPLES FOR STATE AND LOCAL GOVERNMENT INFORMATION: AN ANALYSIS

Information Industry Association
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SERVING CITIZENS IN THE INFORMATION AGE
Meeting the Challenge of Preserving Access to Information
Executive Summary

THE CHALLENGE

New technologies and fiscal pressures threaten one of the most fundamental of all democratic principles - access to government information. State and local governments are at the frontline of the battle to preserve citizen access to information. The Information Industry Association (IIA) has prepared a paper, Access Principles for State and Local Government Information: An Analysis, which proposes six policy principles to preserve access to government information, foster long-term economic growth and ensure that the information needs of Americans are met efficiently and effectively.

DEMOCRACY AND ACCESS TO INFORMATION

Information - and the ability of citizens to acquire, use and disseminate it without fear of government control or interference - has long occupied a significant role in American society. Freedom of speech, the presumption of citizen access to information and a diversity of information sources are the foundation of U.S. democracy and unique among the community of nations.

Citizens, regardless of whether they are acting in an individual or corporate capacity, require timely and accurate information in order to make informed decisions about their personal, economic and professional lives. Citizens also require access to government information if they are to exercise their right of self-government. Government entities at all levels of democracy have a responsibility to guarantee the ability of citizens to acquire information about the workings of government. Working closely with government in meeting these responsibilities, the information industry offers a diversity of products and services tailored to the specific needs of individual users.

Ironically, as the nation enters the Information Age new technologies and growing fiscal pressures are creating serious challenges which threaten the right of citizens to acquire government information. Nowhere are these challenges more seriously encountered than at the state and local level.

Fortunately, there are guideposts to assist policy officials as they grapple with the challenge of preserving access to government information. Statutes, caselaw, and Federal policy experience provide a storehouse of knowledge upon which state and local officials can draw as they shape the laws, policies, and procedures necessary to guarantee continuing citizen access to government information. To assist policy officials and others with an interest in these vital issues, the IIA's paper, Access Principles for State and Local Government Information: An Analysis, provides a summary of the legal foundation upon which access to information is based and suggests a policy framework to secure this foundation in the Information Age.

A POLICY FRAMEWORK TO PRESERVE ACCESS

The policy framework governing access to government information is based on three fundamental tenets: a broad public right of access; a right of nondiscriminatory access; and a prohibition on government control of information access and use. As discussed in the attached paper, each of these tenets is firmly grounded in the Constitution, legislatively-enacted statutes, and judge-made common law.

While the tenets underlying citizen access to government information are clear, legislators and policy officials are grappling with their application in an environment in which technologies are rapidly changing the way in which information is created, used, and disseminated. To assist these officials, the Information Industry Association has identified six principles for public access to state and local information that flow from these tenets.

A Diversity of Information Sources Should Be Encouraged

Government laws, regulations, and policies should facilitate public access to government information by encouraging a diversity of sources, including the library community and private sector information industry, to offer or provide access to such information.

The Public Right of Access Should Be Guaranteed

Citizens have a right of access to information held by government entities which should be restricted only by enactment of narrowly drawn statutes necessary to protect certain specific legitimate interests such as privacy.

Access Rights Should Be Unaffected by Record Storage Medium

Laws, regulations, and policies governing public access to government information should apply equally to all information regardless of the media in which it exists.

Equal and Timely Access Should Be Assured

Information held by a government entity should be available to all persons on an equal and timely basis in all reproducible media used by the government entity to store or distribute the information.

Monopoly Control of Government Information Should Be Prohibited

No person, public or private, should have monopoly control over information held by a government entity, nor should government impose or claim any copyright or other restrictions on the ability of citizens to use and disseminate such information.

Fees for Access Should Not Exceed the Marginal Cost of Dissemination

Government should encourage the widest possible dissemination of public information by making it available at a price not to exceed the marginal cost of dissemination.

The legal and policy basis for each of these principles is described in detail in the attached paper prepared for the Information Industry Association by Piper & Marbury. In addition, the paper also describes how these principles serve the long-term public interest of the citizenry. For these reasons, state and local policy officials are urged to incorporate these principles as they draft information policies and statutes.

FOR FURTHER INFORMATION

For a free copy of the Information Industry Association's Access Principles for State and Local Government Information: An Analysis, contact the Information Industry Association, 555 New Jersey Avenue, N.W., Suite 800, Washington, D.C. 20001 (202/639-8262).

ACCESS PRINCIPLES FOR STATE AND LOCAL GOVERNMENT INFORMATION: AN ANALYSIS*

I. Introduction

Information long has been recognized as playing an essential role in a democratic political system. As James Madison observed nearly two centuries ago:

> A popular government without popular information or the means of acquiring it, is but a Prologue to a Farce or a Tragedy or perhaps both. Knowledge will forever govern ignorance, and a people who mean to be their own Governors, must arm themselves with the power knowledge gives.[1]

Government information thus is a valuable resource that provides the "people" with knowledge of their government, society, and economy, and with the means to accomplish both public and private goals. Not surprisingly, then, every segment of American society uses some government information to function, including governments themselves, all types of businesses and industries, libraries and schools, the media, and ordinary citizens.

An entire industry has developed aimed at disseminating information, including government information, to the public:

> The large and growing private information industry functions in part by taking public government data, adding value to it, and reselling it to others. There are thousands of private sector information products and services based in whole or in part on government information. The nonprofit sector -- including libraries and public interest groups -- provide similar products and services.[2]

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* Prepared for the Information Industry Association by Ronald L. Plesser and Emilio W. Cividanes of Piper & Marbury, Washington, D.C.

1/ G.P. Hunt, ed., IX The Writings of James Madison 103 (1910) (quoting letter to W.T. Barry, August 4, 1822).

2/ House Comm. on Gov't Operations, Paperwork Reduction and Federal Information Resources Management Act of 1990, H. Rep. No. 927, 101st Cong., 2d Sess. 23 (1990) (citations omitted) (hereinafter "1990 House Paperwork Report").

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State and local data form the basis of many of those information products and services. Indeed, a mature information industry has developed around the rich and diverse resource of state and local government information concerning, among other things, real estate and zoning matters; public utilities; commercial (UCC) filings and other corporate documents; statutes and legislative materials; and court and agency decisions.

As James Madison observed, the unrestricted flow of information is essential for the proper operation of our democratic society.. As technology changes, and as state and local governments seeking additional sources of revenue contemplate the economic value of the information in their possession and control, questions arise about what information policies should govern agency decisions.[3] Whether the question arises out of a new problem or out of a recurring one that has been considered and solved by other jurisdictions, there already exists a legal framework for addressing these issues which has the salutary effect of promoting the wide dissemination of public information.

This framework has three main tenets. First, the public has a broad right of access to government information. Its source originates from both judge-made common law and from legislatively enacted statutes. These public access statutes are "straightforward device[s] for the release to citizens of information created with tax dollars."[4] They create a concomitant obligation on the government to ensure the flow of public information between government and citizens, and reflect the judgment that the public interest is best served when the government grants access to its records.[5]

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[3] While the main focus of this paper is on public information administered by executive agencies, much of its discussion also applies to public information created and controlled by the legislative branch. For an excellent survey of how state legislatures provide public access and administer their information dissemination systems, see Hawaii House Majority Staff, "Legislative Access in Hawaii: A Report to the House of Representatives by the House Legislative Access Committee" (1990 2d ed.).

[4] *Associated Tax Service v. Fitzpatrick*, 372 S.E.2d 625, 629 (Va. 1988).

[5] *See* *Techniscan v. Passaic Valley Water Comm'n*, 218 N.J. Super. 226, 527 A.2d 490, 492 (N.J. Super. Ct. App. Div. 1987), *aff'd*, 113 N.J. 233, 549 A.2d 1249 (1988) ("the Legislature made clear that it is the granting of the access by passage of the statute that will accomplish the goal of 'protection of the public interest'").

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Second, the government may not discriminate in its dissemination of public information. Our legal system, through its federal and state constitutions, statutes, and judicial decisions, enjoys a long tradition of barring discrimination by governmental authorities.[6] This tradition is at odds with efforts to discriminatorily deny access to information disseminators or otherwise to single them out to bear special burdens.[7]

Third, copyright-like restrictions on the use of public information are antithetical to the goal of widely disseminating government information. The First Amendment to the U.S. Constitution, the Copyright Act of 1976, and other laws consistently support a completely free marketplace in government information. Governments in democratic societies should not exclusively control how their own information can be used. Because the public's use of government information is a right, not a privilege, any person who has acquired public information should be free to use it, sell it, or otherwise disseminate it without paying any additional fees or royalties to the government.

The following pages discuss six principles for public access to state and local information that flow from these tenets. The principles were approved by the Information Industry Association's Board of Directors on July 23, 1990.

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[6] *See*, *e.g.*, *Brown v. Board of Education*, 347 U.S. 483 (1954); *Yick Wo v. Hopkins*, 118 U.S. 356 (1886).

[7] *See*, *e.g.*, *Minneapolis Star & Tribune Co. v. Minnesota Comm'r of Revenue*, 460 U.S. 575 (1983) (prohibiting the taxing of the press differently from other businesses); *Richmond Newspapers v. Virginia*, 448 U.S. 555 (1980) (plurality opinion) (press has the same right to attend criminal trial as the general public); *Legi-Tech, Inc. v. Keiper*, 766 F.2d 728, 734-35 (2d Cir. 1985) (private vendor of information services has right to access same legislative materials that are offered to the general public).

II. Policy Principles for Public Access to State and Local Information

A. Availability of Diversity of Sources

> Government laws, regulations, and policies should facilitate public access to government information by encouraging a diversity of sources, including the library community and private sector information industry, to offer or provide access to such information.

The best way to ensure the flow of information in our society is to encourage a diversity of government and non-government sources of public information. Support for such diversity of sources is an essential feature of government information activities. As underscored by the constitutional and statutory restrictions on government copyright,[8] and by the public access mandate in Freedom of Information statutes,[9] the government should not exclusively control how its own information can be used. Such exclusive control by government is far from the hallmark of a democratic society such as ours.

The requirement of diversity is an affirmative mandate, not a passive one. If a governmental entity believes it necessary to its mission to disseminate public data in addition to providing access to it, then the government should ensure that the underlying data base is available for redissemination by others. This is particularly the case where an agency is developing a value-added product or electronic application of public data.[10] By ensuring that both the

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[8] See infra at 20-23.

[9] See infra at 6-9.

[10] See, e.g., Legi-Tech, Inc. v. Keiper, 766 F.2d 728 (2d Cir. 1985) (government entity providing value-added information product to the public may not deny a competitor access to the underlying information).

This also is consistent with the recommendation by the 1982 Task Force of the National Commission on Libraries and Information Science ("NCLIS") on the interaction between government and private sector information activities, suggesting that government policy should "[e]ncourage private enterprise to 'add value' to government information (i.e., to

[Footnote continued on following page]

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value-added product and the raw data are available, the government ensures that there are several sources of public information.

The public benefits in various ways from having multiple sources of government information. One way is that nongovernmental dissemination of government information helps to make that information available to more users. As noted recently by a committee of the U.S. House of Representatives, nongovernmental redisseminators of government information play an important role in meeting the information needs of the American public:

> [B]oth the public and private sectors play a necessary, legitimate, and distinct role in disseminating government information. By redisseminating government information, the press, libraries, nonprofit organizations, public interest groups, and the private information industry help the government meet the needs of public users by providing information products and services that the government cannot support or that are beyond the bounds of government activities. At times, the private sector, libraries, and nonprofit organizations provide essential products or services to the government that the government is unable to provide for itself. A diversity of information sources for government information, and not a monopoly, best serves the public interest.[11]

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[10] [Footnote continued]

repackage it, provide further processing services, and otherwise enhance the information so that it can be sold at a profit)." NCLIS, *Public Sector/Private Sector Interaction in Providing Information Services* 63 (1983), *quoted in* House Comm. on Gov't Operations, "Electronic Collection and Dissemination of Information by Federal Agencies: A Policy Overview," H. Rep. 560, 99th Cong., 2d Sess. 61 (1986) (hereinafter "1986 House Policy Report").

[11] 1990 House Paperwork Report, *supra* note 2, at 28. *Cf. Techniscan v. Passaic Valley Water*, 218 N.J. Super. 226, 527 A.2d 490, 492 (N.J. Super. Ct. App. Div. 1987), *aff'd*, 113 N.J. 233, 549 A.2d 1249 (1988) (agency's provision of same search service as the requester does not diminish requester's right of access nor public interest served by unrestricted access to public information).

The public also benefits from diversity because the greater the number of redisseminators of a particular type of information, the more likely it is that someone will package the information in the way that is most useful to, or perhaps cheaper for, a particular class of public users. Also, as a U.S. Senate committee noted recently, "market-driven private sector initiatives often provide needed creativity and flexibility which government cannot."[12] Depriving nongovernmental disseminators of valuable experience in developing information systems to disseminate public information can result in less innovation in the development of information technologies. At the very least, it may impair the ability of agencies and the public to benefit from those technological developments that do occur.

In short, diversity of sources results in more government information getting into the hands of more citizens in ways that are most useful to them. Thus, policymakers operating or developing information dissemination systems should do so with "open-eyed attention to different means of dissemination."[13] One important way, discussed below, is by ensuring that all persons have equal and timely access to the raw information in public data bases at fees not to exceed the cost of dissemination.[14]

B. Right of Access

> Citizens have a right of access to information held by government entities which should only be restricted by enactment of narrowly drawn statutes necessary to protect certain specific legitimate interests such as privacy.

The public's right of access to government information derives from both legislatively enacted statutes and judge-made common law. Many states have modeled or re-fashioned their statutes after the federal Freedom of Information Act ("FOIA"), which was originally enacted in 1966 and has been amended

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[12] Senate Comm. on Gov't Affairs, Information Resources Management Act, S. Rep. No. 487, 101st Cong., 2d Sess. 44 (1990) (hereinafter "1990 Senate Report").

[13] Id.

[14] See, e.g., Federal Maritime Commission Authorization, Fiscal 1990, Pub. L. No. 101-92, § 2(a), 103 Stat. 601 (1989) (requiring agency to incorporate these protections into its public information dissemination system).

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several times.[15] The FOIA requires that each agency of the federal government furnish the public with information which describes the agency's organization and the nature and requirements of all of its functions, as well as with copies of rules of procedures, statements of general policy, final opinions and orders, and staff manuals.[16] In addition, any records not otherwise made available under the Act must be disclosed under a request which reasonably describes the record.[17] The Act creates nine clearly defined and explicitly exclusive exemptions to the FOIA's otherwise mandatory disclosure requirements, exemptions which courts have consistently construed narrowly.[18] Moreover, the Act requires agencies to release all non-exempt segregable portions of otherwise exempt records.[19]

All 50 states and the District of Columbia have some form of FOIA statute, ranging from the simple statement that there shall be access to public records,[20] to rather detailed instructions on access, exemptions, duplication, and use, often supplemented by judicial decisions and opinions of the state attorney general.[21]

As one commentator noted recently, state laws governing public records "all seem to be different":[22]

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[15] *See* Comment, "Public Inspection of State and Municipal Executive Documents: 'Everybody, Practically Everything, Anytime, Except * * *'," 45 Fordham L. Rev. 1105 (1977).

[16] 5 U.S.C. § 552(a)(1) & (2).

[17] 5 U.S.C. § 552(a)(3).

[18] *See* *United States Dep't of Justice v. Tax Analysts*, 109 S.Ct. 2841, 2851 (1989).

[19] 5 U.S.C. § 552(b).

[20] *See*, *e.g.*, S.D. Codified Laws Ann. §§ 1-27-1, *et seq.*; Pa. Stat. Ann. tit. 65, §§ 66.1, *et seq.*

[21] *See*, *e.g.*, Fla. Stat. Ann. § 119.01, *et seq.*; Md. State Gov't Code Ann. §§ 10-611, *et seq.*; Wash. Rev. Code §§ 42.17.250, *et seq.*

[22] J. Kidwell, "Essay: Open Records Laws and Copyright," 1989 Wis. L. Rev. 1021, 1027 (hereinafter referred to as "Kidwell Essay").

> These [statutes] are called "open records" laws ...., "public records" laws, and sometimes "freedom of information" laws. Wisconsin enacted the first such statute in 1849; most other states enacted statutes in the early part of this century. The great majority amended their statutes in the mid to late 1970s, perhaps in reaction to Watergate and other controversies, concerning the concealment of governmental information.[23]

In addition, the common law provides individuals with a limited right to inspect public records.[24] This cognizable common-law interest in obtaining access to public records, however, does not grant individuals an absolute right to the documents. Rather, a citizen's common-law right to inspect public records requires a balancing of interests: the individual's "personal" or "particular" interest in the information against the public interest in the confidentiality of the file.[25]

By doing away with the common-law requirement of showing a personal or particular interest, most FOIA statutes have bestowed on the public an unqualified right of access to government records. Nevertheless, however broad the public's right of access may be, it is not unrestricted. As reflected by the narrowly-construed statutory exemptions to the federal FOIA, there sometimes are legitimate interests that justify __some__ restrictions on the public's right of access. Statutory exemptions from disclosure generally have been drawn from a judicial consensus on the proper resolution of cases seeking access to government records. These exemptions are legislative attempts to "predetermine . . . on a categorical basis" the results of the balancing of interests that courts must undertake in the absence of legislative guidance.[26]

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[23] __Id__. (citations omitted).

[24] __See__, __e.g.__, __McClain v. College Hospital__, 99 N.J. 346, 492 A.2d 991, 994-95 (1985).

[25] __Id__. at 995. __See__, __e.g.__, __Casey v. MacPhail__, 2 N.J. Super. 619, 65 A.2d 657 (Law Div. 1949) (where former Supreme Court Justice William Brennan, then a Superior Court judge, ordered that voting lists should be turned over to a candidate for public office because he had a legitimate interest in ascertaining that only those who have a right to vote in the municipal election should, in fact, vote).

[26] Project, "Government Information and the Rights of Citizens," 73 Mich. L. Rev. 971, 1176 (1975).

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The most commonly recognized exceptions to the public's right of access are: (1) personal information the disclosure of which would constitute a clearly unwarranted invasion of personal privacy; (2) commercial trade information belonging to a private entity and usually either used by the government under contract or required by law to be filed with the government for regulatory purposes; and (3) information withheld for security reasons, *e.g.*, law enforcement investigatory files the release of which could reasonably be expected to disclose the identity of confidential sources.

The scope of these exemptions and the procedures by which the public may test their invocation varies from jurisdiction to jurisdiction, although it is generally agreed that the exemptions must be narrowly construed.

C. *Access Rights Unaffected By Record Storage Medium*

> Laws, regulations, and policies governing public access to government information should apply equally to all information regardless of the media in which it exists.

Legislatures, courts, and executive officials have usually interpreted FOIA statutes to include public records regardless of the medium in which they exist.[27/]

In this Computer Age, access to electronically stored information has become an increasingly important issue. In the increasingly "paperless" environment, restrictions on access to computerized information translate into obstacles -- sometimes insurmountable -- to public access to government information. To distinguish between information stored in paper format and electronic format is to deny the public the same rights of

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[27/] *See, e.g.*, *Weisberg v. Department of Justice*, 631 F.2d 824, 827-28 (D.C. Cir. 1980) (copyrighted photographs are agency records for purposes of federal FOIA); *Save The Dolphins v. Department of Commerce*, 404 F. Supp. 407, 410-11 (N.D. Cal. 1975) (same for motion picture film); *Lorain County Title Co. v. Essex*, 373 N.E.2d 1261, 1263 (Ohio Ct. App. 1976) (microfilm is an agency record for purposes of state FOIA); 87 Tex. Op. Att'y Gen. ORD-461 (1987) (advising that audio tapes of meetings are public records for purposes of state FOIA) Conn. Gen. Stat. § 1-18a(d) (1988) (definition of "public records" includes audio-video recordings); La. Rev. Stat. Ann. § 44:1 (West 1982) (definition of "public records" includes microfilm as well as audio-video recordings); Md. State Gov't Code Ann. § 10-611 (1984) (same).

access to information maintained by public agencies in electronic file cabinets as it has to inspect government information maintained in the traditional metal drawer.

Fortunately, on the issue of access to electronic information, there is wide unanimity. Many states specifically include computerized information in their public records statutes, either defining public records to include such information,[28] or by other provisions relating to electronic access, searches, or fees.[29]

Whenever the question has been presented to the courts, they have uniformly concluded that electronically stored information is subject to public records laws.[30] Supreme Court Justice Anthony Kennedy, applying federal law while serving as an appellate judge, ruled that "computer-stored records . . . are still 'records' for purposes of the FOIA."[31]

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[28] *See*, *e.g.*, Cal. Gov't Code § 6252 (Deering 1982); Ind. Code § 5-14-3-2 (Burns Supp. 1989); Md. State Gov't Code Ann. § 10-611 (1984); Mich. Stat. Ann. § 4.1801(2)(e) (Callaghan 1985); Neb. Stat. Ann. § 84-712.01(1) (1987); N.Y. Pub. Off. § 86(4) (McKinney 1988); Okla. Stat. Ann. tit. 51, § 24A.2 (West Supp. 1990); Or. Rev. Stat. § 192.410 (1989); Wash. Rev. Code Ann. § 40.14.010 (Supp. 1990); Wis. Stat. Ann. § 19.32(2) (West 1986).

[29] *See*, *e.g.*, Fla. Stat. Ann. § 119.085; Iowa Code Ann. § 22.2(3) (West 1989); Kan. Stat. Ann. § 45-219 (1986); Mo. Rev. Stat. § 610.026.

[30] *See*, *e.g.*, *State, ex rel. Recodat Co. v. Buchanan*, 46 Ohio St. 3d 163, 546 N.E.2d 205 (Ohio 1989) (agency must make available public records information stored on magnetic tape at the same cost as is charged for copies made from records maintained in paper); *Minnesota Medical Ass'n v. Minnesota*, 274 N.W.2d 84 (Minn. 1978) (fact that data was stored on computer tape did not affect public status of agency record).

[31] *Long v. Internal Revenue Service*, 596 F.2d 362, 365 (9th Cir. 1979), *cert. denied*, 446 U.S. 917 (1980). *Accord* *Yeager v. Drug Enforcement Admin.*, 678 F.2d 315, 321 (D.C. Cir. 1982).

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This also is the view of -- among others -- state FOIA administrators,[32] the Administrative Conference of the United States ("ACUS"),[33] and the American Bar Association ("ABA").[34]

While the law is less emphatic on whether a requester has a right to an electronic copy of electronically-stored public information, the better view is that a requester has (or should have) such a right.[35] As stated by a congressional committee:

> An agency cannot justify denying the public the benefits of new technology . . . . If an agency has developed the ability to manipulate data electronically, it is unfair to restrict the public to paper documents. *An agency must expect to upgrade public access to and use of agency records as its own information capabilities are upgraded.*[36]

Nevertheless, agencies in some instances have denied access to public information in an electronic format on the ground that the same information is available in some other form. For example, a New Hampshire agency refused to provide a computer tape at a cost of $55, insisting instead that the requester (a university researcher) gather the same information from 35,000 cards.[37] In another case, a New York City agency also refused to provide a copy of a computer tape to a publisher, proposing instead that the requester pay for a printout of the information that would have used vastly more computer time than would have been required to produce a tape. Specifically, it would have taken five to six weeks to print, exceed one million pages in length, and cost $10,000 for paper alone.[38]

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[32] Perritt, "Electronic Acquisition and Release of Federal Agency Information: Analysis of Recommendations Adopted by the Administrative Conference of the United States," 41 Admin. L. Rev. 253, 291 n.111 (1989) (citing the Report of the First National Conference on Issues Concerning Computerized Public Records 17 (1987)).

[33] ACUS Recommendation 88-10, 1 C.F.R. § 305.88-10 (1990). *See generally* H. Perritt, *Electronic Acquisition and Release of Federal Agency Information: Research Report Prepared for the Administrative Conference of the United States* (1988).

[34] *See* ABA Sec. of Admin. L. & Reg. Prac., Resolution No. 102 (approved by ABA House of Delegates on Feb. 19, 1990), *reprinted in* ABA, Annual Report of the Sec. of Admin. L. & Reg. Prac., Vol. 27 at 105-122 (resolution and accompanying report).

[35] *See*, *e.g.*, *Associated Tax Service v. Fitzpatrick*, 372 S.E.2d 625 (Va. 1988) (state FOIA requires agency to furnish a computer tape even where the information is available on paper); *Martin v. Ellisor*, 266 S.C. 377, 223 S.E.2d 415 (1976) (state law requires election officials to furnish requesters with a computer tape rather than a printout or microfiche so long as the requester is willing to pay the cost).

[36] See 1986 House Policy Report, *supra* note 10, at 18 (emphasis supplied).

A requester's desire to obtain copies of public information in electronic form is driven by the usefulness of the format. As demonstrated in the New Hampshire and New York cases, agency denials of access to electronic information in electronic form usually are designed to thwart the requester's *use* of the public information. However, as noted by a split Michigan Supreme Court, "[a] public body should not be allowed to thwart legitimate uses of public information by releasing the information in a format difficult or expensive to use."[39] In this regard, the 1986 congressional report stated:

> When dealing with information, distinctions between form and substance are difficult to apply. In many instances, *the form in which information is provided makes a great deal of substantive difference to the way the data can be used*.[40]

The usual excuse for denying electronic access to public information is that the purposes of public disclosure statutes are satisfied by the release of the *information*, even if it is not necessarily in the *form* preferred by the requester.[41] The few agencies and courts adopting this

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[37] *See Menge v. City of Manchester*, 311 A.2d 116 (N.H. 1973) (ordering agency to provide information on tape).

[38] *See Brownstone Publishers v. New York City Dep't of Buildings*, 550 N.Y.S.2d 564 (N.Y. Sup. Ct. 1990) (requiring agency to provide the information in the manner preferred by the requester).

[39] *Kestenbaum v. Michigan State Univ.*, 414 Mich. 510, 327 N.W.2d 783, 802 (1982) (evenly divided court).

[40] 1986 House Policy Report, *supra* note 10, at 36 n.151 (emphasis supplied).

[41] *See, e.g.*, *AFSCME v. County of Cook*, 182 Ill. App. 3d 941, 538 N.E.2d 776 (1989).

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position usually rely on *Dismukes v. Department of Interior*,[42] a rare federal court decision adopting this view.[43]

In *Dismukes*, the plaintiff had sought certain public records on a computer tape. The Interior Department already had the records in both microfiche and computer tape. The agency offered to provide the plaintiff with the requested information but only on microfiche, asserting that microfiche was a more useful form for the public than computer tape. Finding that the tape and microfiche were "equivalent agency records," the court held that Interior did not "improperly withhold" agency records where it released in microfiche the same quantum of information as that requested in tape.

Dismukes rested on the proposition that the FOIA was directed at the release of *information* rather than agency *records*.[44] The agency thus satisfied its obligations under the FOIA where it released the same information in a different format than the one requested.

Not only has *Dismukes* been widely criticized,[45] but at least two developments counsel strongly against continued reliance on that decision. First, a 1989 Supreme Court ruling clearly undercuts *Dismukes*' rationale. In *United States Dep't of Justice v. Tax Analysts*,[46] the Supreme Court unambiguously stated that courts in FOIA cases must direct their analyses at the releasability of agency *records*, not the requesters' ability to obtain the *information* contained in these records in some other fashion.

Furthermore, the Supreme Court in *Tax Analysts* pointed to the wide dissemination of similar information in different forms as a reason why Congress may have declined to exempt all publicly available materials from the FOIA's disclosure requirements:

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[42] 603 F. Supp. 760 (D.D.C. 1984).

[43] *See, e.g.*, *AFSCME*, *supra* note 41, 538 N.E.2d at 778-79 (expressly adopting the *Dismukes* rationale).

[44] *See* 603 F. Supp. at 761-62.

[45] *See, e.g.*, 1986 House Policy Report, *supra* note 10, at 36 n.151; 16:9 Access Reports 3 (May 2, 1990) (*Dismukes* is "one of the most annoying obstacles still in place from the early days of electronic records litigation").

[46] 109 S. Ct. 2841 (1989).

> [S]uch an exemption would engender intractable fights over precisely what constitutes public availability . . . . In some sense, nearly all of the information that comes within an agency's control can be characterized as publicly available. *Although the form in which the material comes to an agency* -- *i.e.*, a report or testimony -- may not be generally *available*, *the information* included in that report or testimony *may very well be*.[47]

Thus, the Supreme Court's focus on records rather than information in *Tax Analysts*, and its observation on the dangers of denying requests merely on the ground that the requested information is publicly available in a different form, both undercut the rationale relied on by the *Dismukes* court.

Second, the same judge who decided *Dismukes* recently held that the same agency involved in *Dismukes* could not deny a requester computer tapes of information that the agency already furnished in paper form.[48] Thus, it would appear that the *Dismukes* court has overruled itself *sub silentio*.[49]

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[47] *Id*. at 2852 (emphasis supplied).

[48] *Petroleum Information v. Department of the Interior*, C.A. No. 89-3173-JHG (D.D.C. Dec. 22, 1990) ("a standardized data record containing the alphanumeric [version of information] depicted in currently public [agency paper] files" is not exempt from disclosure), *appeal filed* (Feb. 15, 1991).

[49] *But see Coalition for Alternatives in Nutrition and Healthcare, Inc. v. Food & Drug Admin.*, C.A. No. 90-1025 (D.D.C. Jan. 4, 1991) (where a different judge of the same court relied on *Dismukes* in ruling that the agency had satisfied its obligations under the FOIA by releasing the requested records in microfiche form rather than in hard copy form).

Another development undercutting continued reliance on *Dismukes* is the clear intent of the relevant Congressional committees to overturn it reflected in the legislation reauthorizing the Paperwork Act. *See*, *e.g.*, H. Rep. No. 927, 101st Cong., 2d Sess. 26 n.25 (1990). The information dissemination provisions of the legislation commanded broad bicameral support. The legislation passed the House but stalled in the Senate because of opposition to other provisions. *See* 48 Cong. Q. 3699 (Nov. 3, 1990), *id*. at 1130-35 (April 14, 1990).

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Most fundamentally, as pointed out by a split Michigan Supreme Court, the rationale for refusing electronic copies of public records is itself bankrupt and could lead to absurd results:

> Following that rationale would encourage a public body to meet its FOIA requests with the response that the actual public document or "writing" cannot be copied, but the agency will gladly produce the same "information" in a "less intrusive" form such as a foreign language, Morse Code, or hieroglyphics.[50]

Thus, some state legislatures have enacted laws designed to accommodate the multi-media needs of "users" of public information. Maryland, for example, grants requesters the right to a "copy" or a "printout" of public records,[51] which are defined as including "computerized record[s]," "recording[s]," or "tape[s]."[52] If the record custodian does not have facilities to make a copy or printout, requesters may have access to records to make a copy or printout using the requester's equipment.[53]

Other states accomplish their desired goal by establishing user fee guidelines. Oklahoma, for example, which provides for "mechanical reproduction" as well as "copying" of records,[54] and defines records as including "computer tape, disk, and record,"[55] prohibits charges "for purposes of discouraging requesters for information or as obstacles to disclosure of requested information."[56]

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[50] *Kestenbaum*, *supra* note 39, 327 N.W.2d at 802.

[51] Md. State Gov't Code Ann. § 10-620 (1984).

[52] *Id.* at § 10-611.

[53] *Id.* at § 10-620.

[54] Okla. Stat. Ann. tit. 51, § 24A.5 (West Supp. 1990).

[55] *Id.* at § 24A.2.

[56] *Id.* at § 24A.5.3. *See also* Ga. Code § 50-18-71 (Supp. 1990) (requiring agencies to "utilize the most economical means available for providing copies of public records"); S.C. Code Ann. § 30-5-30(b) (Supp. 1990) (requiring that records "be furnished at the lowest possible cost" and that they be provided in a form that is convenient for the requester "if it is equally convenient for [the agency] to provide the records in such form").

D. *Equal and Timely Access*

> Information held by a government entity should be available to all persons on an equal and timely basis in all reproducible media used by the government entity to store or distribute the information.

As the Virginia Supreme Court observed about its own FOIA statute, public access statutes are considered "straightforward device[s] for the release to citizens of information created with tax dollars."[57] By treating public records as belonging to the public, rather than to the government, and by providing such records in a way that facilitates rather than hinders their use, government entities truly advance the goals of public disclosure laws.

Agencies, for example, should not stand in judgment of a person's right to public documents on the basis of the use to which he or she plans on making of them. Such discretion allows agencies to use public information to barter or engage in favoritism. Nevertheless, some agencies have tried to deny a requester access to public information if the requester's purpose is commercial in nature.[58] A citizen's right to public information should not hinge on whether the citizen's efforts to obtain the information are motivated by profit or by purely "private" reasons. Once it is demonstrated that records are "public" in nature and are not otherwise protected from disclosure, a citizen's right of access should be absolute.[59] Indeed, as discussed above, that right is

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57/ *Associated Tax Service*, *supra* note 35. 372 S.E.2d at 629.

58/ *See*, *e.g.*, *Techniscan v. Passaic Valley Water*, 218 N.J. Super. 226, 527 A.2d 490, 491 (N.J. Super. Ct. App. Div. 1987), *aff'd*, 113 N.J. 233, 549 A.2d 1249 (1988) (reversing agency's denial of access to public records because of requester's pecuniary motive).

59/ *Id.*, 527 A.2d at 492. *Accord* *Associated Tax Service*, *supra* note 35, 372 S.E.2d at 628-29 (allowing the government to challenge a citizen's motivation "would turn the Act into a battleground for litigation;" purpose or motivation behind request for public information is irrelevant to a citizen's right to records under state FOIA); *Title Research Corp. v. Rausch*, 450 So.2d 933 (La. 1984) (agency may not deny access to public records simply because requester intends to use

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enhanced when access policy encourages the development of a diversity of information sources.

As a split Michigan Supreme Court observed, such equal access is the best protection against political favoritism and other governmental abuse of public records:

> [P]olitical favoritism might well occur if the state is free to distribute useful political materials with unfettered discretion. . . . [U]nder the correct interpretation of the act, the potential for such abuse is eliminated because the requested "public record" must be made available to all persons equally.[60]

Moreover, unequal access is constitutionally prohibited. The U.S. Constitution and the constitutions of the states require governments to carry out their duties in a nondiscriminatory manner. It is well established, for example, that the guiding principle of the equal protection clause of the U.S Constitution is that people who are alike should be treated alike.[61]

Legi-Tech, Inc. v. Keiser[62] illustrates how constitutional values come into play in the dissemination of public documents. There, the U.S. Court of Appeals for the Second Circuit took a dim view of a state statute that discriminated in the dissemination of public information. The statute denied the sale of publicly available services from a state-owned computerized data base to entities offering competing electronic information retrieval systems. The state-owned data base contained the full text of legislation and other related information.

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[59] [Footnote continued]

requested information for commercial purpose); *Hoffman v. Commonwealth of Pennsylvania Gaming Comm'n*, 455 A.2d 731, 733 (Pa. Commw. Ct. 1983) (agency may not deny profit-motivated requester access to public information; a citizen's right to examine public records does not depend upon any other "right, privilege, or immunity" but rather on "whether the documents are within the framework of public records").

[60] *Kestenbaum*, *supra* note 39. 327 N.W.2d at 802 n.32.

[61] *See*, *e.g.*, *Williams v. Vermont*, 472 U.S. 14 (1985) (striking down tax scheme favoring "established" state residents over newer ones).

[62] 766 F.2d 728 (2d Cir. 1985).

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Legi-Tech, a competitor of the state-owned service, argued that the law was unconstitutional. The state defended the law as a reasonable protection of the state's "natural monopoly" on computer-supplied legislative information. The state was concerned that resale by Legi-Tech would undercut the profitability of its business.

Besides viewing the state's actions as an exercise of censorship, the court was repelled by the effort at "den[ying] to Legi-Tech the very access to information offered to the general public."[63] Finding that Legi-Tech had a right of access to the data base's information, the court of appeals remanded the case to the lower court for a determination of several factual issues. A settlement was subsequently reached whereby the state commission provides Legi-Tech with access to the information at a negotiated price.

Another settlement, this one involving the frequency and format in which a federal agency disseminated public information, was reached *in Journal of Commerce v. United States Dep't of Treasury*.[64] Claiming unconstitutional discrimination, the plaintiff publisher had sued the U.S. Customs Service to enjoin the agency from providing port authorities with vessel import data via *on-line* computer access to Customs' Automated Manifest System ("AMS"), while furnishing the plaintiff and other members of the public with the AMS data only via *weekly tapes* access. The settlement provides that the agency will furnish the public and the press with *daily* tapes, which contain the same information that it provides the port authorities via on-line access to AMS.[65]

In addition to equal access, the *Journal of Commerce* case also highlights that "information, like money, has a time value."[66] Because of this value, governments should ensure

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[63] *Id.* at 734. The court also rejected the state's claim that where a government is not constitutionally required to furnish certain information, then the government may discriminatorily deny access to that information without running afoul of the First Amendment. *See id.* at 734-35.

[64] C.A. No. 88-21320-CRR (D.D.C. 1988).

[65] *Cf. Price v. Fulton County Comm'n*, 170 Ga. App. 736, 318 S.E.2d 153, 156 (Ga. Ct. App. 1984) (not unlawful for agency to provide public information on tape to a commercial entity provided the agency makes tapes equally available to other members of the public).

[66] *See* 1990 House Paperwork Report, *supra* note 2, at 28.

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that they provide timely access to information. "A person who receives information ahead of another may have an advantage. Information delayed can be information denied."[67]

These judicial decisions underscore that as a matter of both law and policy, the public is best served by ready access to government information, that is, equal and timely access to public records. In this context, "equal" means nonexclusive and nondiscriminatory, and "timely" means without undue delay.

E. No Monopoly or Copyright-like Controls

> No person, public or private, should have monopoly control over information held by a government entity, nor should government impose or claim any copyright or other restrictions on the ability of citizens to use and disseminate such information.

As one court of appeals has stated: "The evils inherent in allowing government to create a monopoly over the dissemination of public information in any form seem too obvious to require extended discussion."[68]

To ensure equal and timely access to public records, government entities must avoid arrangements that afford them or any private company or other non-governmental entity with any monopoly power over the public information. The main public policy tenet here is that public information should be disseminated to all. The mere fact that an agency creates or collects the information is no basis for it to grant itself or any other person a franchise over public information. No agency should be able to give itself or any other user or class of users an unfair advantage in the access to (or dissemination of) public information.

As one official of OMB's Office of Information and Regulatory Affairs observed:

> It happens so often that the government is in a monopolistic position with respect to information resources. . . . The least that the government can do [to have marketplace forces operate with regard to the dissemination of public data] is to assure that when the information is disseminated, it is done in a fair

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[67] Id.

[68] *Legi-Tech*, *supra* note 62, 766 F.2d at 722.

> and equitable manner so that everyone in the marketplace has an equal chance at the information at the same time.[69]

An agency's use of a contractor to operate an information dissemination system on behalf of the agency can create an opportunity for monopolistic control. However, no monopoly control problems will arise if the contractor -- in acting as the agency's proxy -- abides by the same legal and public policy requirements that govern the agency's actions. In other words, a contractor may operate an information dissemination system on behalf of the government if the contractor disseminates information to the public on the same terms that the government would if the government operated the system itself.

To this end, an agency should take all appropriate steps to preclude the contractor from gaining an unfair advantage over others in its non-governmental use or dissemination of the data. As a congressional committee recently noted:

> No agency contractor may be permitted [1] to make use of information -- other than for legitimate agency purposes -- before the information is made available to other public users [or] . . . . [2] to discriminate among public users or [3] to deny, delay, or otherwise limit access or charge higher prices to users who may be competitors with the contractor in the commercial marketplace for agency information.[70]

The U.S. Congress already has incorporated these prohibitions into federal law when authorizing public funds for the development of information dissemination systems, for example, at the Securities and Exchange Commission and at the Federal Maritime Commission.[71]

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[69] 1986 House Policy Report, supra note 10, at 61 n.297 (quoting an article by J.T. Sprehe).

[70] 1990 House Paperwork Report, supra note 2, at 51.

[71] See, Federal Maritime Commission Authorization, Fiscal 1990, Pub. L. No. 101-92, § 2(a), 103 Stat. 601 (1989) (Automated Tariff Filing and Information System ("ATFI")); Securities and Exchange Commission Authorization Act of 1987, Pub. L. No. 100-181, § 1, 101 Stat. 1249, 1251 (1987) (Electronic Data Gathering, Analysis, and Retrieval).

Also in furtherance of the public policy goal of ensuring the widest dissemination of public information, governmental entities should not be free to restrict or regulate the use, resale, or redissemination of public information by the public. Government information is both a public good and an unregulated commodity. If an agency can *disclose* a government document because its contents pose no threat to government security, or to reasonable personal privacy or confidential business expectations, then no legitimate governmental purpose is served by permitting the agency to limit the public's *use* of that public information.

Courts, for example, have almost uniformly held that certain types of information are beyond any government control, be it federal, state, or local. Thus, they have rejected attempts at restricting the use of information contained in court decisions,72/ statutes or regulations,73/ and legislative materials.74/

Copyright is the standard device by which creators of information enjoy the exclusive right to control the use of their work. While the first explicit prohibition against copyright of federal government information dates back to 1895, it was generally recognized before then that copyrighting of government materials was improper.75/ There had been no statute on the subject prior to 1895 "'because none was

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72/ *See Wheaton v. Peters*, 33 U.S. (8 Pet.) 591 (1834) (denying reporters of Supreme Court decisions copyright on the opinions); *Nash v. Lathrop*, 142 Mass. 29, 35 (1886) ("all should have free access to the opinions, and . . . it is against sound public policy to prevent this").

73/ *See*, *e.g.*, *Building Officials & Code Adm. v. Code Technology, Inc.*, 628 F.2d 730 (1st Cir. 1980) (public may not be prohibited from copying the official version of a privately developed building code that had been licensed to governmental agency after it had been adopted as law); *State of Georgia v. Harrison Co.*, 548 F. Supp. 110, 114 (N.D. Ga. 1982), *vacated per stipulation*, 559 F. Supp. 37 (1983) ("The public must have free access to state laws, unhampered by claim of copyright, whether that claim be made by an individual or the state itself.").

74/ *See*, *e.g.*, *Legi-Tech, Inc. v. Keiper*, 766 F.2d 728 (2d Cir. 1985).

75/ *See Wheaton*, *supra* note 72; *Nash*, *supra* note 72; 1986 House Policy Report, *supra* note 10, at 24 n.91.

necessary.'"[76] Today, section 105 of the Copyright Act *expressly* bars the federal government from copyrighting its works.[77]

However, even in the absence of statutory restrictions, the U.S. Constitution restricts federal or state governments from exercising copyright-like controls over public information. As the leading copyright treatise states:

> [O]n a constitutional level any statute which purported to prohibit the reproduction or distribution of governmental documents by reason of the Government's property interest in the ideas or expression contained therein arguably would run afoul of the First Amendment guarantees of freedom of speech and press.[78]

Furthermore, to the extent that many public documents consist of collections of facts, both the First Amendment and the

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[76] *Id*. (citation omitted).

[77] *See* 17 U.S.C. § 105 (1988). The 1976 Copyright Act does appear to contemplate copyright claims by state governments, subject, of course, to constitutional limitations. *See also* Kidwell Essay, *supra* note 22, at 1029-29 (emphasis supplied):

> Some would argue that since nearly everyone agrees that status as a public record does not destroy third-party copyrights, there is no reason to believe that state [FOIA] statutes should be read to destroy governmental copyright claims either. . . . [One possible counter to this argument is] that most open records statutes were written with little regard for the problem of third-party proprietary rights. Therefore, inferences from the preservation of third-party proprietary rights are unjustified. It was probably *assumed* that the vast majority of records subject to the open records laws *would* be governmentally authored. *Lawmakers did not contemplate . . . that these tedious compilations of government information could become commercially valuable*.

[78] 1 *Nimmer on Copyright* § 5.06[B] (1985).

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Constitution's Copyright Clause would appear to prohibit any person from asserting a copyright on those facts.[79]

Nevertheless, some states do assert copyright in public information.[80] Moreover, the dangers of copyright-like control over public information are made more acute by the new capabilities of electronic information systems which enable agencies to exert copyright-like control over public domain data, a type of control that is often more difficult to exert when the data is not maintained electronically. When a person obtains paper copies of public records, there are limited means at an agency's disposal to restrict subsequent use of those documents. However, if the same records were being provided by an on-line electronic information system, the agency has the most effective means available to enforce its restrictions on a person's use of the public information: it can cut off the person's continued access to the system.

Governmental entities should not impose copyright-like controls over public information simply out of political expediency or technological capability. As the 1986 congressional report noted with regard to technological capability to impose restrictions:

> Since [copyright-like] controls are not a necessary feature of [electronic information] systems, there should be no difficulty in achieving the benefits of new information technology without any increase in government dissemination restrictions.[81]

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[79] *See Harper & Row Publishers, Inc. v. Nation Enters.*, 471 U.S. 539, 560 (1985). The Copyright Act draws the same distinction between uncopyrightable facts and a copyrightable compilation of facts. *See* 17 U.S.C. § 103. For an authoritative discussion of this distinction, see the Supreme Court's unanimous opinion in *Feist Publications, Inc. v. Rural Telephone Service Co.*, 59 U.S.L.W. 4251 (March 27, 1991) (while a telephone company may have a valid copyright in its telephone directory as a whole, it is not entitled to copyright protection of its white page directory's alphabetical listing of subscriber names, addresses, and telephone numbers because such a listing is an "unoriginal" collection of uncopyrightable facts).

[80] *See, e.g.*, Colo. Rev. Stat. Ann. § 2-5-115.

[81] 1986 House Policy Report, *supra* note 10, at 36.

Again, the U.S. Congress already has begun incorporating these prohibitions into federal law when authorizing the use of public funds for the development of information dissemination systems.[82]

Because such controls go against sound public policy and may run afoul of state constitutions and of the U.S. Constitution, state policy makers should not impose copyright-like controls over public information.

F. User Fees: Marginal Cost of Dissemination

> Government should encourage the widest possible dissemination of public information by making it available at a price not to exceed the marginal cost of dissemination.

Common sense dictates that the lower the price that government charges for access to its records, the more people will be able to use public information. On the other hand, when it conditions the release of information upon the payment of a fee determined by the market value of that information, government exercises copyright-like control over public information.

As discussed above, copyright is the mechanism available to creators of information to prevent others from using or reselling their work. These restrictions make information appear in scarce supply, thereby increasing its value. Copyright thus permits information to be sold at a price that reflects the information's value rather than just the cost of its reproduction.[83]

Because as a matter of both law and public policy governments should disclaim any ability to copyright their own information, they should also disclaim any right to include the value of the information to the recipient when establishing a user fee for that information. The government should not make a profit by selling to its citizens public information collected and compiled at taxpayer expense, nor should it impose excessive cost barriers to the development of new information products and services based on public information.

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[82] See, e.g., Federal Maritime Commission Authorization, Fiscal 1990, Pub. L. No. 101-92, § 2(c), 103 Stat. 601 (1989) (ATFI).

[83] See 1986 House Policy Report, supra note 10, at 24-25.

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A higher price than the cost of information reproduction might be justified if the government's information activities did not serve a public purpose. "But absent a public purpose for a particular information service, the more likely result is that the government should not be offering the service to the public."[84] The government is in the business of providing public services, not commercial services. "[I]n the absence of a public purpose, the private sector [rather than the government] should be [providing] any services demanded by information users."[85]

On the other hand, having paid for the information's collection and compilation, the general taxpayor fund need not bear the cost of disseminating the information to individual users. The cost of obtaining a copy of the public record is appropriately borne by the user.

What costs should be considered to be data creation, collection, processing, and similar functions and not recoverable from public users, and what costs should be considered to be reproduction costs and charged to outside users of public information? With paper records, the answer is relatively simple: the marginal cost of reproduction is the agency's additional cost of making a copy of the record.

With electronic information systems, the answer can be a little more complex. Some guideposts are generally accepted. For example, the costs of computerization for improving internal agency operations are expenses that would be incurred by the government whether or not the system is shared with the public. These costs should be borne entirely by the government. The marginal cost of providing information services to public users is not a part of the basic cost of computerization. This cost can be charged to users.[86]

While schedules for fees that agencies may assess for responding to requests under FOIA statutes are not the only user fee schemes applied, they do provide some insight into some of the different approaches that have been adopted. The federal statute, for example, limits agencies to recovering only the direct costs of searching, duplicating, and reviewing records found to be responsive to a request.[87] Some states like Mississippi have adopted an approach similar to the federal approach.[88]

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[84] *Id.* at 43.

[85] *Id.*

[86] *See generally* 1986 House Policy Report, *supra* note 10, at 40.

[87] *See* 5 U.S.C. § 552(a)(4)(A)(iv).

South Carolina, on the other hand, limits fees to "the actual cost of searching for or making copies," but fees may not be charged for examining and reviewing "to determine if . . . documents are subject to disclosure."[89] Similarly, Florida limits its fees to the actual cost of copying, including "materials and supplies" but excluding "labor costs or overhead costs."[90]

By comparison, Texas agencies may recover "all costs related to reproducing the record, including cost of material, labor, and overhead,"[91] while Idaho permits a higher fee for copies of public records in nonpaper formats.[92]

Many jurisdictions also provide for waiver of all or part of user fees where disclosure of the information is in the "public interest."[93]

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[88] *See* Miss. Code Ann. § 25-61-7 (fees must be "reasonably calculated to reimburse [an agency] for, and in no case to exceed, the actual cost of searching, reviewing, and/or duplicating and, if applicable, mailing copies of public records"); *see also* *Roberts v. Mississippi Republican Party*, 465 So.2d 1050 (Miss. 1985) (agency may not charge more than its actual costs for providing licensed driver lists to political organizers).

[89] S.C. Code Ann. § 30-5-30(b).

[90] Fla. Stat. Ann. § 119.07(1)(a) (West Supp. 1990). *See also* 87-1 Op. Att'y Gen. Fla. 1 (1987) (agency may not charge a fee greater than the cost of copying as a way of recouping costs associated with creating government computer programs).

[91] Tex. Rev. Civ. Stat. Ann. art. 6252-17a, § 9.

[92] *See* Idaho Code § 9-338(8) (fee may equal the "direct cost of copying" plus "[t]he standard cost, if any, for selling the same information in the form of a publication").

[93] *See, e.g.*, 5 U.S.C. § 552(a)(4)(A)(ii)(II); Conn. Gen. Stat. § 1-15 (Supp. 1990); Mo. Rev. Stat. § 610.026; S.C. Code Ann. § 30-5-30(b).

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INFORMATION INDUSTRY ASSOCIATION

The Information Industry Association (IIA) is a Washington, D.C.-based trade association representing over 650 leading companies involved in the creation, distribution and use of information products, services and technologies. The IIA and its members work closely with policy officials, interest groups, librarians and other interested parties to shape information policies and laws that will benefit both citizens and businesses. Among the issues of interest to the information industry are government information policy, protection of intellectual property, privacy and Freedom of Information issues, telecommunications deregulation and development of the information infrastructure. For further information on the IIA, contact the President of the Association, David C. Fullarton, at:

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Mr. WISE. Thank you. Next is Paul Massa. Mr. Massa is president of the Congressional Information Service, Inc., in Bethesda, MD.

STATEMENT OF PAUL MASSA, PRESIDENT, CONGRESSIONAL INFORMATION SERVICE, INC., BETHESDA, MD

Mr. MASSA. Thank you, Mr. Chairman. I'm pleased to be here this morning to have this chance to testify before the subcommittee. Throughout my testimony this morning I will refer to the name of my company, Congressional Information Service, by its initials CIS in keeping with government acronyms.

CIS is a publisher of indexes and other bibliographic information reference tools that help the American public make use of Federal Government information. We publish our reference tools in the form of books. We also publish them in the form of electronic data bases, both online and offline, as CD-ROM products such as you've heard described here this morning by others.

I'm here today to talk about how CIS, in particular, and the American information industry, in general, help the American public use Federal information by creating products that meet the various needs of the American people. Information publishing, as you have already heard, is one of the highly technology intensive industries in which the United States still maintains unrivaled supremacy. And one of the key strengths in this area is our open system of government and the ready access to government information that really strikingly distinguishes us from many other societies.

Americans' rights to this information come from the Freedom of Information Act, which you've heard referred to here, as well as our copyright law. And I'll quote from our copyright law which states that, "Copyright protection under this title is not available for any work of the United States Government."

A long tradition of a vigorous free press has provided the United States with the basis for a flourishing information industry. It includes a variety of types of publishing, print and broadcast news media, books and periodicals, film and video, data base, information storage and retrieval, and a host of others. In fact, most of the information that all Americans consume every day of the week is gathered by, processed by, and distributed by the private sector.

In all too many other countries the legal sources of information are almost exclusively governmental. In those countries we almost always find that the credibility of government information is low. And when those conditions exist there usually are alternative information sources that crop up surreptitiously in order to satisfy the public's demand for information in which they can truly place their trust and rely upon.

In the United States, our public dialog is essentially what it appears to be. There may be conflicting information in circulation but the competing claims for truth are made in the open and they're argued in the open.

Imagine for a moment if we had to rely upon the hordes of government press spokesmen, liaison personnel, public affairs specialists, and a host of others who have been created over the past 30 years as our only sources of information about the Federal Government. Perhaps some of those people are in your very offices.

Imagine further if these employees——

Mr. **Wise**. We have some of them sitting up here. [Laughter.]

Mr. **Massa** [continuing]. And their superiors were free to shape that information—and right now they aren't free to shape it. They have only limited ways of doing that in order to put it in the most favorable light, but imagine if they were free to shape it in a way that would suppress important facts that would in any way exploit fears or otherwise abuse the public trust.

Fortunately, we live in a society that has a heritage of suspicion of government control, and we have been imbued since our founding as a Nation with what some people still consider the radical notion that what belongs to the government belongs to the people.

Besides serving as a vital check on the veracity of facts and figures that flow from the Federal Government, the private sector information industry plays a vital role in bringing to light a lot of information that has simply been overlooked. The government produces mainly information to satisfy its own internal immediate needs, and that's the way it should be. The issuing agency, including the Congress, usually has only a limited concept of the potential public value of the information that it creates. And that's particularly true if the information was classified at the time it was created or if a great deal of time has passed from the time it was created until the time it became available.

And this was the case a few years ago when CIS undertook to index and publish on microfiche thousands of documents in the National Archives and other Federal and private collections relating to the occupation and restructuring of Japan following World War II. The idea for this series of products came about in a conversation that I had in a tea house in Tokyo with the representative of our distributor in Tokyo, the Maruzen Publishing Co. Preliminary editorial work for the project was done by Professor Makoto Iokibe of Kobe University who is a renowned Japanese authority on the occupation period.

CIS worked with Professor Iokibe to refine and shape the editorial design of this series of products. And then CIS located the relevant documents in the National Archives and elsewhere in the United States. We indexed these documents. We filmed them. And we ultimately delivered to Japan, to our counterpart there, a product which will become a series of products. Japan was the primary intended market but of course this product is sold in the United States.

The material on the occupation of Japan was published in three parts. The first part deals with documents produced during World War II relating to all of the planning stages for the occupation. The second part contains documents outlining general U.S. policies during the years of 1945 through 1949. And finally, the third part deals with the implementation of all of those policies by the U.S. Government in Washington and by the occupation forces that were headed by General Douglas MacArthur in Tokyo.

This is only a small example but it does illustrate, we think, how government information can be used creatively by the private sector to create American jobs that result in products for foreign

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markets. This one project was an immediate success both here and in Japan and led us to consider another project with Maruzen in Tokyo.

As you know, the United States played a significant role in rebuilding both Japan's and Germany's educational systems following World War II. And the project that we undertook dealt with restructuring the educational system of Japan. And it involves more than 700 documents that we have collected not only from the National Archives but from the Hoover Institution and the University of Maryland's east Asia collection as primary sources. A second part of this project is now under way and it's going to bring to light even hundreds more documents.

The widespread interest that greeted those publications suggested to CIS still another project. With the advice and the assistance of Professor Theodore McNelly of the University of Maryland, CIS designed and developed a product pertaining to the adoption of the constitution of Japan which went into effect in 1947 and remains in force today unaltered.

Although this microfiche publication was assembled from many documents throughout the United States, the primary source was once again the National Archives. Titled "Framing the Constitution of Japan, Primary Sources in English, 1945–1949," this publication has been very well received, both here and in Japan.

As a final example, I refer to another CIS product involving a parallel set of documents pertaining to the educational reform that took place in Germany following World War II. The editor's note to the index of this project communicates, we think, a sense of the uniqueness of American presumptions about the right of access to government information, as well as a sense of the immediate value of documents long after the purposes for which they were originally intended have been served and passed.

And I'm going to quote from the introductory note that was written in 1991 by the project editor, Professor Gary Tsuchimochi of Toyo Eiwa Women's University in Japan:

> The quantity of materials in the United States relating to the Occupation of Germany is extraordinary. Moreover, the United States has been more liberal than the other three occupying nations, Great Britain, France, and the Soviet Union, in opening its archives on the Occupation of Germany to historians. The British have only recently begun to grant access to their records, the French resolutely maintain their 50-year rule, and the Soviets have never announced a schedule of public access to documents on the Occupation.
>
> The materials in the United States are relatively well organized. The majority can be located at the National Archives and Records Administration in Washington, D.C. and its associated Washington National Records Center in nearby Suitland, Maryland. These documents are available to all historians and can be copied as needed.

The series of publications that I have referred to here, the various examples relating to the occupation of Germany and Japan illustrate, we think, the benefits that flow from public access to well-preserved public documents. Access to these materials has enabled CIS and its partners to make the significant investments needed to enlist skilled editors and to draw upon a range of sources nationwide to create indexed microfiche publications of enduring research value.

In the process, CIS has created jobs, export earnings have been realized, but perhaps most important, innovative new resources have been made available to help us better understand the history of our country and the history of the world.

In testimony that I delivered before this subcommittee in the summer of 1989, I said and I'll quote again:

> The proper role of the government is to meet its internal information needs, to preserve its records, and to make them available to the public in a form that is both reasonably convenient and reasonably economical. The role of the private sector is to complement the official distribution system by responding to the public need for sophisticated tools for acquisition, storage, retrieval, analysis, and processing of government information.

That's what I said in 1989 and I would submit that it remains today a pretty good description of the respective roles of the private sector and the government in the distribution of government information. However, I want to underscore that in saying that the information industry complements the role of the Federal Government, it does not mean that the information industry plays a secondary role.

Rather, the information industry presents a clear example of how, just as in the production of pharmaceuticals, life insurance, airplanes, or many other goods and services that are deemed essential for the public welfare, public purposes are most efficiently and most effectively served through private means.

In an era when the information industry consisted almost exclusively of newspapers, Thomas Jefferson said, "Were it left to me to decide whether we should have a government without newspapers or newspapers without government I would not hesitate a moment to prefer the latter."

Newspapers and other news media satisfy the demand for knowledge about daily events. But other parts of the information industry satisfy the equally deep need for information to interpret the present and the past and to help us chart a course for the future. I've illustrated this function with several examples and I could cite dozens more but time does not permit that. It is part of the genius of an open society in which demands for information can be freely registered that a creative response to significant information need will nearly always be forthcoming without government intervention.

The best way for the public to receive the maximum possible value from Federal information is for the Federal Government to concentrate on the production of information meeting the highest standards of integrity and upon dissemination in the simplest and most economical form that most reasonably meets the needs of most users. Second, the government should scrupulously respect the necessity for a diversity of information sources. And the way to assure such a diversity of sources is to promote and encourage conditions that will in fact bring about more rather than less competition among disseminators.

Thank you for the opportunity to share these thoughts with you this morning.

[The prepared statement of Mr. Massa follows:]

Testimony of Paul P. Massa
Before
Government Information, Justice, and Agriculture Subcommittee
Committee on Government Operations
U.S. House of Representatives
February 19, 1992

Good morning, Mr. Chairman and members of the subcommittee. My name is Paul P. Massa. I am President of Congressional Information Service, Inc. and I appreciate your invitation to speak in this forum today.

CIS is a publisher of indexes and other bibliographic reference tools that help the public to make use of information produced by the federal government. Our reference tools are published as printed books, and some of them are also available as electronic databases. CIS's online databases can deliver detailed information about the contents of federal publications to the desk of anyone in the United States -- or in the world, for that matter -- who has a computer terminal and a telephone. The same databases are also available on compact disc. This new high-density medium can be used with personal computers to give on-site access to quantities of bibliographic information about federal documents which, just a few years ago, would have required a mainframe computer and an immense investment in software.

I am here today to talk about how CIS in particular and the American information industry in general use federal information to create products that meet the endlessly varied needs of the

American people and that contribute to human welfare around the globe. Information publishing is one of a diminishing number of technology-intensive industries in which the United States enjoys an unrivaled primacy. One key to American strength in this area is our open system of government and the ready access to government information that so strikingly distinguishes us from many other societies. Americans' rights to government information are protected by the Freedom of Information Act and by the unqualified statement in our copyright law that "Copyright protection under this title is not available for any work of the United States Government."[1] Further, these protections secure the basic conditions for access through a diversity of sources, both public and proprietary.

A long tradition of a vigorous free press has provided the United States with the legal and cultural foundations for the development in this century of a flourishing information industry. This diversified group of enterprises includes the print and broadcast news media, book and periodical publishers, film/video production and distribution companies, database publishers, information retrieval firms, and many others. The preponderance of information essential for the defense of our freedom, for scientific and technological advances, for economic progress, and for making choices about our society's future either originates with or is processed and distributed by the information industry.

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[1] 17 U.S.C. §105 (1988).

In our country, information that enables us to conduct our daily national life is placed in public circulation largely by means of private distribution. In all too many other countries, the legal sources and distributors of information are almost exclusively governmental. In those countries we almost always find that the credibility of government-distributed information is low. Moreover, under such conditions, alternative information distribution systems generally spring up surreptitiously to satisfy the demand for information that people value and in which they can place their trust.

In the United States, our public dialogue is basically what it seems to be. Issues are addressed in a relatively straightforward manner. When they are controversial, the public is generally exposed to a variety of fully articulated viewpoints. There may be conflicting information in circulation, but the competing claims for truth are made and argued in the open. No one need base his or her judgements and decisions on a personal network of clandestine information sources. Moreover, because there exists a multiplicity of sources of information, government-issued facts and figures can be easily checked, and spurious interpretations challenged.

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Imagine for a moment that we had to rely upon the hordes of government press spokesmen, liaison personnel, and "public affairs" specialists that have been created over the past thirty years as our only sources of information from the federal government. Imagine further that these employees and their superiors -- who now for the most part have only limited powers to depict events in the most favorable light -- were completely free to craft the information they distribute to suppress important facts, to exploit latent fears and prejudices, and to otherwise abuse the public trust.

Fortunately, we live in a society with a heritage of suspicion of government control, and we have been imbued since our founding as a nation with the still-radical idea that what belongs to the government belongs to the people. Enterprising reporters and scholars -- as well as the media firms, information publishers, and educational institutions that employ and support them -- have the right of access to alternative sources of documentary evidence, and to the raw information that underlies agency publications.

And so, when the State Department recently issued a new volume of a historical series titled Foreign Relations of the United States[2] that failed to acknowledge the role of the United States

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[2] Foreign Relations of the U.S., 1952-1954. Vol. X: Iran, 1951-1954.

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in toppling the government of Iran in 1953, historians protested vigorously. Scholars and analysts both within and outside the U.S. government have long accepted what the State Department effectively refused to concede: that the U.S. supported the coup against the government of Iranian Prime Minister Mohammed Mossadeq. Publications referring to this incontrovertible fact have been widely disseminated by other parts of the federal government and by the information industry.[3] Henceforth, no historian will accept the Foreign Relations of the United States as the definitive record on this matter. The outcry over the State Department's distorted version of the historical record led to legislative action designed to prevent any such misleading representations in the future. Public Law 138 of the 102d Congress includes amendments to the State Department Basic Authorities Act of 1956 that will protect the Foreign Relations of the United States as "a thorough, accurate, and reliable documentary record of major United States foreign policy decisions and significant United States diplomatic activity."[4] The State Department appears to be energetically implementing the

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[3] See, for example, testimony of Clyde Mark, Analyst, Foreign Affairs and National Defense Division, Congressional Research Service, in The Middle East, hearings before the Subcommittee on Near Eastern and South Asian Affairs of the Senate Committee on Foreign Relations, 102d Congress, 1st Sess. (April 22, 1991), p. 50. See also the reference on p. 33 to the same events in the prepared statement of Bruce R. Kuniholm, Chairman of the Department of Public Policy Studies of Duke University. These hearings have been republished in the CIS/Microfiche Library under accession number (91) S381-41.

[4] 105 Stat 647, §198.

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measure, which includes provisions establishing a new advisory board that will have access to classified material.

Besides serving as a vital check on the veracity of facts and the validity of interpretations that a government agency might issue, the information industry, working in concert with the academic community, plays a vital role in bringing to light documentary material that has simply been overlooked. The government produces information mainly to satisfy its own immediate needs, and that is the way it should be. Often the issuing agency has only a limited concept of the potential public benefit of its information, particularly if the information was confidential at the time of creation and is destined to become publicly accessible only after a considerable amount of time has passed.

Such was the case a few years ago when CIS undertook to index and publish on microfiche thousands of documents in the National Archives and in other federal and private collections relating to the occupation and reconstruction of Japan in the years following World War II. The idea for this project evolved from a conversation I had in Tokyo with the Japanese publisher who represents us there, the Maruzen Publishing Company. Preliminary editorial work for such a project was done by Professor Makoto Iokibe of Kobe University, a renowned Japanese authority on the occupation period.

CIS worked with Professor Iokibe to refine the editorial design of the proposed collection. Then CIS located relevant documents in the National Archives and elsewhere. We indexed and filmed them; and we delivered the product to Maruzen for sale in Japan, the primary intended market. CIS does, of course, sell this collection in the United States and elsewhere.

The material on the occupation of Japan was published in three parts. The first consists of U.S. documents produced during World War II that deal with preparations for the occupation. The second part contains documents outlining general U.S. policies during the occupation years of 1945 through 1952. The third part consists of documents concerning the implementation of those policies by the U.S. Government in Washington and by the occupation forces headed by General Douglas MacArthur in Tokyo.

While this is only a small example, it illustrates how government information can be used creatively by the private sector to create American jobs that result in products for foreign markets.

The widespread interest that greeted the publication of these indexed document sets on the occupation of Japan suggested to CIS another project. With the advice and assistance of Prof. Theodore McNelly of the University of Maryland, CIS designed and developed an indexed microfiche set of documents pertaining to the adoption of the Constitution of Japan, which went into effect

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in 1947 and which continues in force without alteration to this day. Although this microfiche publication was assembled from many documents collections, the National Archives was once again the principal source. Titled Framing the Constitution of Japan, Primary Sources in English, 1945-1949, this publication has been very well received both in the United States and in Japan.

The success of the original three-part series on the occupation of Japan also led us to consider another project with Maruzen focusing specifically upon the rebuilding of Japan's educational system following World War II. As you know, the United States played a significant role in the rebuilding of Japan's and Germany's education systems after the war. This project includes more than 700 documents selected primarily from the National Archives, the Hoover Institution, and the University of Maryland's East Asia Collection. A second part of this project is now underway, and will bring to light several hundred additional documents.

As a parallel project to the one on Japanese educational reform, we next began work on a fascinating collection of U.S. documents pertaining to educational reform during the postwar occupation of Germany. The editor's note in the index for this project communicates a sense of the uniqueness of American presumptions about the right of access to government information, as well as a sense of the immense value of official documents long after the purposes for which they were prepared have been served. The following are excerpts from the introductory note written in 1991 by project editor Gary Tsuchimochi of Toyo Eiwa Women's University in Japan:

> "The quantity of materials in the United States relating to the Occupation of Germany is extraordinary....Moreover, the United States has been more liberal than the other three occupying nations, Great Britain, France, and the Soviet Union, in opening its archives on the Occupation of Germany to historians. The British have only recently begun to grant access to their records, the French resolutely maintain their fifty-year rule, and the Soviets have never announced a schedule of public access to documents on the Occupation.
>
> The materials in the United States are relatively well organized....The majority can be located at the National Archives and Records Administration (NARA) in Washington, D.C. and its associated Washington National Records Center (WNRC) in nearby Suitland, Maryland....
>
> Of course, there are regulations and restrictions governing use of these official documents, and entrance to the premises is strictly regulated. However, these documents are available to all historians, and can be copied as needed. Therefore, at present, NARA and WNRC are the

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> most promising archival collections for historians of the German Occupation."

This series of publications on the postwar occupation of Japan and Germany illustrates the benefits that flow from public access to well-preserved public documents. Access to these materials has enabled CIS and its partners to make the significant investments needed to enlist skilled editors and to draw upon a range of sources nationwide to create indexed microfiche publications of enduring research value. In the process, jobs have been created, export earnings have been realized, and, perhaps most importantly, innovative new resources have been made available to help us better understand the history of our country and our world.

The CIS Legislative Histories Annual provides a final example of how CIS creates and disseminates sophisticated information services that are based upon federal information. The CIS Legislative Histories Annual is a comprehensive reference work that covers all public laws -- except ceremonial and housekeeping measures -- that are enacted in each session of Congress. For each public law, CIS provides a citation and the law's long title, together with a brief annotation, if necessary. We provide citations for all directly related committee reports, including reports on companion bills and predecessor bills, and for committee hearings, committee prints, and House and Senate documents. We also cite all relevant debate found in the Congressional Record, as well as Presidential statements issued upon signing the law.

But we do not stop there. For laws of major consequence -- including all those for which far-reaching decisions on interpretation are likely to rely in part on the legislative history -- we provide: abstracts of all cited congressional reports, hearings, prints and documents; citations for all relevant bills, whether directly or indirectly related; citations for all House and Senate debate and floor action both on the enacted bill and on all companion and predecessor legislation in the current Congress and in prior Congresses; and citations for indirectly related reports, prints, hearings, and documents.

The CIS Legislative Histories Annual also includes an index to public laws that provides access by subject, by names of affected agencies, organizations, and geographic entities, and by designated short title. We also furnish an index by bill number that refers the user from the bill number to the public law for which the bill forms part of the legislative history.

The contents of the CIS Legislative Histories Annual are also included in our Congressional Masterfile, a compact disc product that contains CIS's well-known indexing and abstracts for essentially all congressional hearings, prints, documents, and

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reports, whether they form part of a legislative history or not. This product -- or the printed books containing the same material -- can be found in the House and Senate libraries, as well as in various Library of Congress divisions and annexes on Capitol Hill. It is also the standard reference tool of its type in most libraries throughout the country and the world that have significant collections of congressional publications.

The individual congressional publications cited in the CIS Legislative Histories Annual and in the Congressional Masterfile are acquired by many libraries as part of comprehensive CIS microfiche sets. In addition, CIS offers a service whereby selected publications can be acquired individually, either in microform or in the form of paper enlargements regenerated from microforms.

CIS legislative histories offer a classic example of how government information, issued in a form that is suitable for the work of the government, forms the base for a sophisticated information product that is designed to meet the specialized needs of a particular group of users -- in this case law librarians, attorneys, and others whose work involves interpretation or implementation of federal law and who need access to the full legislative record. To identify this group of users, to assemble the legal and editorial expertise to produce the sophisticated kind of products that they desire, and to be responsive to their changing needs is not something for which taxpayers should have to pay.

Indeed, while it is quite expensive to produce a publication like the CIS Legislative Histories Annual, it takes much more than money. It takes the freedom to hire the best possible personnel, to manage their work with flexibility, and to reward them according to performance. It takes a dedication to excellence that is possible only when customer satisfaction is the primary focus of the organization. And it takes a motivation that is sharpened by the awareness that success or failure depends completely on the effort expended by oneself and one's colleagues. These are all conditions that prevail in the information industry. They are the reasons why the information industry is uniquely equipped to serve those whose needs for government information are not satisfied by federal documents in their original published form.

In testimony delivered before this subcommittee in the summer of 1989, I stated:

> ...the proper role of the government is to meet its internal information needs, to preserve its records, and to make them available to the public in a form that is both reasonably convenient and reasonably economical. The role of the private sector is to complement the official distribution system by responding to the public need for sophisticated

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> tools for acquisition, storage, retrieval, analysis, and processing of government information.

That, I would submit, remains a good description of the respective roles of the government and the information industry today. I should underscore that to state that the information industry "complements" the role of the government does not mean that the information industry plays a role of secondary importance. Rather, the information industry presents a clear example of how, as in the production of airplanes, pharmaceutical products, life insurance, and many other goods and services deemed essential for public welfare, public purposes are efficiently accomplished through private means.

To take note of the government obligation to make its information available in no way implies that the information industry plays a role that is any less central, or that the conditions that allow it to flourish can be sacrificed to expedient government interests in a pinch. In an era when the information industry consisted almost exclusively of newspapers, Thomas Jefferson said:

> "Were it left to me to decide whether we should have a government without newspapers or newspapers without government I would not hesitate a moment to prefer the latter."[5]

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[5] Letter to Colonel Edward Carrington, Jan. 16, 1787.

While newspapers and other news media satisfy the demand for knowledge about the events of the day, other parts of the information industry satisfy the equally deep need for information to interpret the present and the past, and to chart a course for the future. I have illustrated this function with several examples; I could cite dozens more. It is part of the genius of an open society in which demands for information can be freely registered that a creative response to a practical need for a sophisticated information system will nearly always be forthcoming without government intervention.

The best way for the public to receive the maximum possible value from federal information is for the government to concentrate on the production of information meeting the highest standards of integrity, and upon dissemination in the simplest and most economical form that reasonably meets the needs of most users. Second, the government should scrupulously respect the necessity for a diversity of information sources. The way to assure a diversity of sources is to promote conditions that encourage more -- rather than less -- competition among other disseminators. The creativity stimulated by a fair and predictable business environment will ensure that the American public will always have innovative products based on federal information to meet our ever-changing needs.

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Mr. **Wise**. Thank you, Mr. Massa.

Our final witness is Gail S. Dykstra, the senior director of policy and programs from the Canadian Legal Information Centre from Toronto. And Ms. Dykstra, the subcommittee greatly appreciates the efforts you have made to be here and to present us your information. Thank you.

STATEMENT OF GAIL DYKSTRA, SENIOR DIRECTOR, POLICY AND PROGRAMS, CANADIAN LEGAL INFORMATION CENTRE, TORONTO, CANADA

Ms. **Dykstra**. Thank you, Mr. Chairman. It's an honor to have been asked.

I represent the Canadian Legal Information Centre which is a nonprofit organization created by the Government of Canada as well as the information users and the information producers. Canada, like the United States, shares a commitment to the role of government information in a democracy.

We also share a public demand for information that increases on a daily basis. Another thing that we share on both sides of the border, is the fact that issues of access are being debated on a daily basis against issues of cost, ownership, and control.

Perhaps mine is a cautionary role for this panel. Perhaps I can use the Canadian experience to show what happens without: Clear policies regarding ownership; a consensus as to the roles for the public and private sectors; a willingness to remove barriers to information and dissemination; and a true commitment to innovation and participation by both public and private sectors.

We have found that the following will be the result: A confusing array of government information policies; a chilling effect on private information dissemination attempts; and a conflicting message influencing policy—"better service versus saving money"—acting as a constant counterweight to one another.

There are significant differences between Canada and the United States, chief among them are Crown copyright. I am not a copyright lawyer. As a matter of fact, I'm not a lawyer at all. So perhaps I overstate the case, but I think I come close by saying Crown copyright is a legal principle that has been tested in the U.K. but not so much in Canada.

It is, however, written into the Canadian Copyright Act at the Federal level. And it can be summarized as saying: If the Crown creates it, it owns it; not only does it own it, but it can control who publishes it. The principle of Crown prerogative allows the government the sole right to determine who will publish things like the statutes, regulations, and judicial opinions.

What does this mean in principle? It means in principle that that control of information, the flow of information and access to it, is solely within the prerogative of the government. The government, of course, operates that way in a responsible manner for the benefit of the citizen. But what is the practical reality that results from that principle?

Let me give you a few examples. In 1987, a series of hearings on copyright were held by the Parliament. And during the series of hearings there were a number of representations regarding access to legal information, primarily statutes, regulations, and decisions. The committee hearing and the representations decided that they must recommend that statutes, regulations, and decisions be exempt from Crown copyright.

This was, however, not followed and the Copyright Act of 1988 saw all of those included. In May 1991, a new Federal Government information policy saw the government actually enforce the right of copyright regarding statutes, regulations, and judicial decisions.

We have, like the United States, different jurisdictions and overlapping responsibilities. All of the provinces have yet to speak as to how they intend to deal with Crown copyright. I'll give you two examples from one end of the spectrum to the other.

The Province of Alberta has not decided exactly how they're going do deal with it. However, they have an unofficial policy in which all you have to do is ask permission and it will be given. Their only concern is they wish to guard against inaccuracies.

However, the British Columbia Government has taken a more proactive stance regarding Crown copyright and its enforcement. In 1988, it gave exclusive rights for the publication and distribution of all of its government publications to a private concern, Crown Publications. In 1991, Crown Publications instigated a suit against Quickscribe Services, which is a small, private publisher which takes things like the Municipal Act, puts it together with all of the regulations and all of the other policy and legislative documents, and makes it available both in an electronic form and on a loose leaf basis. This is sold to both the public and the private sector.

Quickscribe purchases the statutes and they totally reenter the statutes. They do not use an electronic product at all that is provided by the government. The suit, although it has not yet been heard, has—to say the least, a chilling effect. This would be an understatement, I think it will have a freezing effect on private industry efforts to make information available.

What I have also tried to explain is the fact that we have differences between the provinces and the Federal Government and a confusing array of practices. The Federal Government says, "You don't have to pay us a royalty but you do have to ask us permission to reproduce statutes, regulations, and judicial decisions." In principle, no one actually uses this. Publishers of print versions do not ask permission, lawyers certainly do not, and the public never does.

However, the Federal Government has decided that as far as its electronic products are concerned they will indeed assert Crown copyright and they will start to charge for access.

We are in a transition phase. I can't tell you what the end result will be. I can tell you that to say that it is a confusing situation is an understatement.

There is also a lack of consensus as to the appropriate roles for the public and the private sectors in making information available. While there is a general agreement that both need to be involved, there are two very different opinions as to who should be doing what.

There has also been a chilling effect on private publishing efforts. I used the example of Quickscribe Services in British Columbia. Let me use another example to show bureaucratic delays. If the publishers have to apply every time for a permission to quote a statute it will result in considerable delays for all types of publication. There is also a concern about the awarding of exclusive contract for reproduction of government information, particularly information that is so vital in a democratic society.

The Information Technology Association of Canada's Information Industry Committee has adopted a policy in which it strikes a balance between the assertion of Crown copyright and the practical realities of Crown control. They believe that nonexclusive rights should be granted.

IIC/ITAC favors free and open access to government information by all members of the public. Any given information property should be available to any member of the public willing to meet licensing criteria that have been established. This is not only a view of the publishing industry in Canada. It is also a view that is supported by the user community.

In a statement before a task force created by the Canadian Legal Information Centre, Montreal Area Law Libraries said, "Government should grant the private sector nonexclusive rights to their raw data for developing and disseminating value-added products. Competition, as opposed to monopoly leads, to a better quality of product. Prices can and will be controlled by market forces."

The conflicting message from the public regarding better service and saving money has meant that reasonable cost generation has been hotly debated. On one hand, the public's attitude is we need to save money and therefore the government should maximize all of its resources including its information. On the other, the government should be prohibited from trying to avoid its responsibility of providing information.

We don't have a solution. We think that the issues must be resolved. And to assist in that, the Canadian Legal Information Centre has established a committee, a national task force which has gone across the country to hear people's views. The committee has yet to meet and it would be presumptive of me to tell you of what it will or it will not decide.

However, I can tell you that the status quo is no longer acceptable. There is a new willingness on the part of the government as well as on the part of the private sector to try and find reasonable, practical solutions to these problems. I can only urge you to, first of all, to look at the example of Canada and look at your own burgeoning private information industry and the conflicts that it has come up against regarding public rights to information.

Thank you.

[The prepared statement of Ms. Dykstra follows:]

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Presentation to

U.S. House of Representatives

Subcommittee on

Government Information, Justice, and Agriculture

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by

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Executive Summary

Canada has laws and policies regarding the ownership and access to government information. We lack clear policy directions and consensus on how government information should be disseminated. This results in:

- an often confusing array of different government dissemination practices,
- no consensus as to the appropriate roles for the public and private sectors in making information available,
- a chilling effect on private publishing efforts,
- conflicting messages from the public influencing policy development - "better service vs saving money."

The public's need for government information has been affected. The move to electronic information sources has exacerbated this problem.

There are significant differences between government information systems in the United States and Canada. Ownership of Canadian government data, through Crown copyright, is one of the major differences. There are also many similarities. Finding new sources of money to meet government information needs is the same on both sides of the border. Governments, at all levels, are looking at their information as a means of generating revenue.

Finding ways to solve these problems must become a priority. In Canada, the Canadian Legal Information Centre (CLIC) has used its nineteen years of experience to bring together information users and producers to resolve these issues as they apply to information on the law.

CLIC sponsored public consultations across Canada as a part of its National Task Force on Access to Government Information on the Law. Presentations at the meetings from publishers, public interest groups, educational institutions, and libraries show that the status quo is no longer acceptable. There is a new willingness by governments, the public interest sector and publishers to examine these issues and co-operatively find practical solutions.

Canadian Legal Information Centre (CLIC)

The mission of the Canadian Legal Information Centre (CLIC) is to promote a better understanding of the law in Canada by improving access to legal information. CLIC fulfils its mandate by:

- Identifying access barriers to legal information and research and demonstrating practical solutions to these impediments;
- Promoting improvement in the quality of legal information and access to it by involving the appropriate agencies and institutions involved in the administration of justice;
- Being Canada's national clearinghouse to identify, collect, disseminate and monitor all matters that pertain to access to information on law;
- Facilitating demonstration projects designed to solve access to legal information problems.

CLIC's Funding

CLIC is a non-profit charitable organization. Grants for core operations and funding for its research projects are sought from a number of agencies. These include governments, law societies, law foundations and legal professional associations. Membership fees for individuals and institutions are kept at a nominal rate, to encourage the widest possible range of members.

CLIC's Perspective

CLIC's experience is in setting legal information policy and observing the legal information scene. In preparing this brief, some examples have been used from the wider government information publishing and dissemination practices. However, most of the examples in the brief come from the legal information scene.

Access to Government Electronic Information on Law

More and more, legal information takes the form of an electronic file. This data is processed and accessed electronically for reasons of speed, cost-effectiveness and improved storage and retrieval.

Issues of access are being measured against issues of cost, ownership and control. CLIC recently adopted a set of "Access Ideals" to guide itself and others in evaluating the level of access Canadians have to legal information.

CLIC's Access Ideals

1. Public access to legal information is essential in a democracy and is required for the proper functioning of our legal system.
2. Those who produce or store legal information should regard its dissemination as an essential public service.
3. Access should be quick and convenient.
4. Access to legal information ought not to be restricted because of cost.
5. Legal information should be as accurate and as comprehensive as possible.
6. Legal information should be conveniently available, disseminated, or distributed, according to the nature of the information and the nature of the user.
7. Legal information should be accessible to all users on an equitable basis and accommodate special needs.
8. Legal information should be available in official languages and other languages where warranted.
9. Legal information should be clear.

Planning for Future Access

It is essential that Canada's high standard of access to information on the law be maintained. Equitable access to legal information will not "just happen." It needs to be planned. CLIC is the catalyst that brings the key players together to acquire the information they need to plan for access to legal information in the 90's.

Creating a workable access plan requires a consultative process. CLIC created a national Task Force to debate these issues and recommend ways in which Canada can ensure its continued access to legal information. Members of the Task Force include information specialists representing governments, the legal profession, law schools, law librarians, legal publishers and systems developers and operators.

In 1990/1991 CLIC undertook a major research effort to gather information on government dissemination policy on electronic legal information: Electronic Legal Information: Exploring Access Issues.[1]

The study identified important access issues related to copyright, economics, availability, distribution and ease-of-use. The background report was circulated among key individuals. It was received with enthusisam. CLIC's initiative in opening up these issues for discussion was applauded by users and information producers alike.

A national policy forum was sponsored by CLIC in May 1991 and followed up with seven regional consultations across the country. The consultations allowed a wide range of individuals and organizations to participate. The debate and discussion produced thoughtful comments on the issues. Task Force members attended the consultations. The edited notes from the consultations will assist the Task Force to formulate recommendations for maintaining and improving Canada's future access to electronic information on law.

Government Information Policy in Canada

There is no single Canadian government information policy. After all, Canada, like the United States, has multiple jurisdictions with overlapping responsibility for providing information to the public. The provinces and the federal government use many laws and government policies to express their policy directions.

For example, the federal government uses the following to express its information policies.

Federal Legislation:

Access to Information and Privacy (ATIP) Acts
The Copyright Act
The Official Languages Act
The Financial Administration Act (FAA)
Various statutes that call for the publication of government
  information, such as the Publication of Statutes Act, Statutory Instruments Act, etc.

Federal Policies:

Policy on Government Communications
Policy on Management of Government Information
  Holdings
Policy on External User Charges
Government Security Policy
Treasury Board Manual, Information and Administrative
  Management Manual Shared Management Agenda

The provinces duplicate these policies and laws with their own. Some provinces vigorously assert ownership of all government-produced information on the law, others do not. Some parts of information policies within a government are vigorously enforced, others are not.

Government officials who manage information resources are dedicated to the principles of public access. They share a commitment to providing the public with accurate information in a timely manner. They strive to do this at a reasonable cost, both to taxpayers and to the direct users of the information. The issue of "quality control" over government information is of paramount concerns to these officials.

Canada and the U.S.: Differences
Crown Copyright vs Public Domain

The most striking difference between federal government information policy in the U. S. and Canada is the concept of Crown copyright. In the United States federal government information is in the public domain. In Canada, federal information is owned and controlled by the government through Crown copyright.

Crown Copyright

Crown copyright is a contentious issue. The following description of the concept of Crown copyright and the discussion about it has been reproduced from CLIC's recent publication, Electronic Legal Information: Exploring Access Issues.[2] It offers an overview that has been reviewed by proponents of both points of view and found to be a fair summary of the debate.

Crown Copyright - An Overview

Crown copyright is described in section 12 of the Copyright Act. It was taken from the UK Imperial Copyright Act, 1911. Section 12 says that where a work is prepared by or under the direction or control of the Crown or government department, copyright immediately vests in the Crown where it remains until publication and for 50 years more. Where a work is independently prepared but later published by or under the direction or control of the Crown or government department, copyright remains with the author until publication. Publication by the government immediately transfers copyright to the government for 50 years. Although the applicability of section 12 to the provinces is in question, the provinces can still claim copyright over protected works through Crown prerogative.

Crown "prerogative" describes certain powers, rights, immunities and privileges necessary to the maintenance of government. These powers are unique to the Crown at both the federal and provincial levels. Among them are the exclusive right of the federal and provincial governments to print certain types of works. The goal of Crown prerogative is to ensure the quality, accuracy and credibility of the information. The works encompassed by the royal prerogative power are not well defined and may or may not cover databases. Although the Crown prerogative copyright has been cited in many judicial opinions, it has not been judicially tested, so its nature and extent are not certain. It is known, however, that this exclusive right to certain works by prerogative amounts to a perpetual term of copyright protection.

Should Crown Copyright Apply to Primary Legal Materials?

Although there are questions as to the coverage of Crown copyright, the focus of the issue is not on its present applicability to one type of source material rather than another.

The debate concerns whether Crown copyright should be retained or released by government for all primary legal materials.

At one end of the spectrum, the view is that ownership rests with the Crown in works created by government employees in the performance of their duties and in works prepared or published by or under the direction and control of Her Majesty or any government department. These materials include statutes, regulations and judicial opinions. Crown copyright exists for a variety of reasons, including the need for control over access, economics and the quality of the data. Government has a responsibility to ensure that works created by public servants are managed properly. In addition, government is accountable to the people and must protect the public interest. Ownership by the Crown is in reality ownership by the people. Taxpayers expect that governments will be good stewards of public funds. Good management of these resources requires control over them.

Most people stating that ownership rests with the Crown made a point of emphasizing the importance of ensuring public access to legal information. Their argument is that Crown copyright should be supported as long as public access to legal information is not restricted. As long as the Crown is merely asserting control over what is done commercially with this information and public access is not being restricted, they believe Crown copyright is not a significant issue.

At the opposite end of the spectrum is the position that, as a matter of public policy, the law should be in the public domain. The law derives its authority from the consent of the public. Therefore, the public is entitled to access to the law it has authorized. Further, the public is obligated to know the law. If that obligation is to continue, the public should have ready access to the law that governs them. Removing statutes and judicial decisions from copyright protection is the best means of ensuring the widest possible dissemination with the fewest delays. Copyright over judicial decisions would enable each government to restrict the dissemination of judicial opinions, including those dealing with matters affecting the Crown. Access to this information is crucial in a democracy and should not be restricted.

According to the public domain perspective, the greatest value to the public results from the widest possible dissemination of legal information. Restricting dissemination is not in the public interest. Government control over this information is not necessary because only those distributors who provide accurate and timely access to legal information at a cost seen as reasonable by its buyers will survive.

Congressional Responsibility and Information Policy

Another difference between Canada and the U.S. is the role of the Congress in setting information policy. The work of the House and Senate committees with responsibility for government information is not mirrored by Canadian federal committees. There have been no Canadian federal legislative initiatives similar to recent efforts to create a U.S. federal information dissemination policy through the Paperwork Reduction and the Federal Information Resources Management Act of 1990, H. Rep. No.927, 101st Congress, 2d Session 23 (1990). While the federal government and several provinces have Acts governing "Access to Information and Privacy," there have been no moves to incorporate the U. S. distinction between the concepts of "dissemination" and "access" into legislative action.

Summary

In summary, there is no single dissemination policy for Canadian government information. Each government sets its own policies through legislation, regulation, policy directives and procedures.

Crown copyright remains a contentious isssue in Canada. In its research, policy forum and regional consultations, the CLIC Task Force heard from individuals, governments, and organizations on the matter of Crown copyright and control. The legal information community in Canada is looking to the CLIC Task Force to review the issues and make recommendations. It is hoped that the Task Force will be able to recognize both public rights and government responsibilies in resolving the Crown copyright issue.

It should be noted that in 1985 CLIC adopted a resolution calling for government information to be placed in the public domain. No change to this resolution has been made, pending the report of the CLIC Task Force.

Results

Result: • Confusing array of different governmental practices

Governments vary in their legislation and policies. The variance in enforcement can result in a confusing array of government practices. For example, the federal government requires the private sector to ask permission before quoting from its statutes, regulations and judicial decisions. It does not charge a royalty, but it does require that permission be obtained.

Yet, this requirement is frequently ignored. Publishers of print versions generally do not ask for permission. They are, with notable exceptions, not prosecuted. Lawyers do not ask for permission when reproducing statutes, regulations or decisions from government publications. The public certainly does not ask and it is not prosecuted.

The federal government sees a distinction between paper and electronic versions of the same information. According to the brief submitted to the CLIC Task Force by the Canada Communication Group- Publishing (CCG-P is part of the federal department of Supply and Services, Canada), the private sector is required to obtain a written permission from CCG-P before reproducing statutes, regulations or judicial decisions. However, no royalty will be charged unless, "the private sector requests material on a specific format or with some value added, the costs of furnishing these requests will be charged."[3]

Professor Robert Franson of the University of Alberta stated, at a recent CLIC Task Force consultation, that tougher enforcement of Crown copyright would set up a double standard. Statutes in areas such as oil and gas regulation are already published freely. "If I need permission from every province to gain access to statutes, I'll have big problems as a teacher." He said, " There is not enough secretarial time for professors to deal with copyright restrictions every time they need access to statutes and regulations for teaching purposes."[4]

Result : • Lack of consensus as to the appropriate roles for the public and private sectors in making information available

What are the appropriate roles for the public and private sector in making government information available? While there is general agreement that joint participation will serve the public's needs best, there is no consensus as to where the lines of responsibility should be drawn.

Governments have a responsibility to serve the public's right to their information. This means, in effect, a responsibility to produce both "profitable and unprofitable" information. It also means supporting a dissemination system consisting of depository libraries, public sales and government access points.

In the series of CLIC consultations, the roles for public and private publishers were hotly debated. The contentious questions that arose were:

- Should governments have a right to limit competition or to make a profit along with their responsibility to produce and disseminate public information?

- Should private publishers be able to "skim off" the profitable information resources and leave the rest for the government to produce?

- Will publishers act in this manner, or can they be compelled to take on some of the "unprofitable" production/dissemination roles?

- Should governments "compete" with the private sector? If the private sector has a publication available, should a government produce a competitive product?

Result: • Chilling effect on private publishing efforts

Commercial publishers claim that the lack of clear dissemination policies has a "chilling effect" on the publication of legal information. This claim is made, in particular, with respect to the claim of Crown copyright on primary sources of legal information such as statutes, regulations and judicial decisions.

In their representation to the CLIC regional consultations, several law book publishers concluded that:

> "Crown copyright should not exist in primary legal information as it has and will continue to cause unnecessary bureaucratic delays, significant investment risk to legal publishers and potentially increased costs to the public with the prospect of payment of royalties to the government."[5]

The prosecution of a publisher for "unauthorized" but accurate re-publication of government information has been cited by other publishers as a consequence of the lack of consensus.[6]

"Exclusivity" in awarding contracts for reproducing government information is seen as counter-productive. There is a growing sentiment for non-exclusive licensing of government information. It is argued that non-exclusivity in granting licences would promote more fair and equitable access by all segments of the public and private sectors. This is a position shared by some publishers and public interest groups. For example, the Montreal Association of Law Libraries, and the Information Industry Committee (IIC) of the Information Technology Association of Canada (ITAC) both expressed this view in their presentations to CLIC's Task Force on Access to Government Information on the Law.

IIC/ITAC's official position is that:

> "Non-exclusive rights should be granted. IIC/ITAC favours free and open access to government information by all members of the public. Any given information property should be available to any member of the public willing to meet licensing criteria established."[7]

Speaking for IIC/ITAC, Bob Gibson of Micromedia Ltd. said,

> "Crown copyright is our central target, because we have yet to hear an argument that makes any sense in its defence. The government should behave as any other corporate citizen in terms of copyright. It should have the right to register copyright on documents it wishes to protect, but should for the most part make public-record information free of copyright." [8]

The view of the Montreal Association of Law Libraries is similar.

> "Government should grant the private sector non-exclusive rights to their "raw data", for development and dissemination of "value-added" products. Competition, as opposed to monopoly, leads to a better quality of product. Prices are controlled by market forces.[9]

Result: • Conflicting messages from the public influencing policy development - "better service vs saving money"

> "It may well be that the Government's program for cost recovery will come into conflict with the necessity of making the justice system work efficiently.[10]

On one hand, the public wants better access to government information. On the other hand, the public wants governments to spend less money. Government dissemination policies are caught in the uncomfortable middle.

While governments are not generally adopting a profit orientation for their information products, they are mandated to recover their costs. Further, governments do not get to "pick and choose" between profitable and unprofitable information products. They are required to make all of their information available. They are also looking for ways in which they can develop new technologies and technological solutions to their information management problems. Charging user fees for information is seen as a logical and fair way of recovering direct production costs.

At the same time, there is a growing need by the public for information. The normal channels for information-access, through libraries and educational institutions, need additional resources in order to meet the demands of the public for electronic information access. People should not have their access to information limited by their ability to pay.

> "Is government information a commodity to be sold to help governments balance their budgets, or is it something to be made available for the public good."[11]

In the recent CLIC national consultations on Access to Government Electronic Information on Law, a number of participants expressed the view that the public should not be made to pay twice for information.

> "It is likely that copyright costs to be borne by the publishers of primary legal materials will be passed onto the ultimate consumer, i.e. lawyers and their clients. Consumers of the "law" produced by these institutions should not have to pay twice for primary legal materials.[12]

Balancing Revenue Generation and Information Access

Officials on both sides of the U.S. and Canadian borders have looked at control of information resources as a way to generate the funds needed to introduce new and improved information management/retrieval techniques. States, such as Colorado, and many municipalities, have asserted copyright control over their information. The U.S. government's policy of "public domain" covers the majority of government documents produced in the U.S. The federal government is after all, the largest publisher in the world. There have been bills introduced in the Congress that would see a limited copyright over certain types of government information.

The Canadian experience with Crown copyright and the discussions around access/dissemination policies can be of use to the House Subcommittee on Government Information, Justice, and Agriculture. A list of publications on these topics is available from CLIC's national clearinghouse.

Facilitating Access - Public/Private Partnerships

Finding new ways to encourage government-private sector publishing partnerships is the goal of the Interdepartmental Working Group on Database Industry Support (IWGDIS). Operating with participation from a wide range of federal departments, the Working Group has met with the publishing industry, has researched ways in which the Canadian information industry can be supported, and has sponsored conferences.[13]

The Working Group recently issued guidelines on government database dissemination. Disseminating Database Information: Practical Guide for Government Managers (Ottawa:IWGDIS, 1991). The goals of the Guide are:

> " A. to respond to the demand from the information industry for improved access to Government data and more consistency in the way that Federal Government departments make available their information holdings to the private sector
>
> B. to provide guidance to Federal Government managers in dealing with the private sector information industry."[14]

The guidelines identify the dissemination options and attempt to streamline the process of concluding agreements for electronic information initiatives.

Finding ways to facilitate public/private partnerships in government information is a popular theme for conferences and working meetings in Canadian publishing. A number of innovative co-operative efforts have been launched to provide wide public access to government information by using the resources of both the public and private sectors.

There is a general recognition by government departments, at the federal and provincial levels, that access policy directions will be co-operatively arrived at through a process of consultation. The consultation process will involve many departments and many government perspectives.

> "The issue of Crown copyright and control of statute, regulation and judgement databases as well as other primary legal information raises numerous questions. These ownership issues will be determined by federal government policy, led by other federal departments and agencies such as the Departments of Communications, Supply and Services and Consumer and Corporate Affairs and the Treasury Board Secretariat. Any future decisions undertaken by the Department of Justice will reflect these policies."[15]

What is Needed Now?

It is clear that the status quo is no longer an acceptable response to the contentious issue of Crown copyright. Neither will maintaining the status quo solve the thorny issues of revenue generation and access. Nor will it define and resolve the responsibilities and roles for the public and private sectors in making government information on the law available.

What is needed is communication and a willingness to accept new patterns of cooperation. CLIC's Task Force on Access to Government Electronic Information on the Law has become a catalyst for a reappraisal of old positions. Publishers, governments, libraries, the public interest sector, and the legal profession are re-examining the possible solutions.

Government information is in a transition stage. Today, providing electronic and paper forms of the same information is seen by some as different. This will change as information is routinely made available in electronic forms. It will be important to develop dissemination policies that recognize this transition. Dissemination policies need to look toward the future, rather than replicating the access patterns of the past.

Dissemination policies must be co-ordinated with other government information policies. In addition, government dissemination policies must take into account the policies and concerns of the information infrastructure, such as Canada's National Library, public and specialized libraries and educational institutions. Canada can also learn from the experience of other countries.

House Subcommittee on Government Information

The experience of the United States with federal information policy development has been used by Canadian organizations. The work of CLIC's Task Force has certainly benefitted from the transcripts of the House of Representative's Subcommittee on Government Information, Justice, and Agriculture. *Electronic Collection and Dissemination of Information by Federal Agencies: A Policy Overview*[16] has been of particular use. It clearly sets out advantages and disadvantages of different government policy directions. Its explanation and analysis of the economic implications of information policy stand out as coherent frames for developing departmental dissemination activities.

Further, dissemination policies need to recognize that balancing public information needs with available dollars will always involve compromise. But, these compromises must always lean toward the public access perspective.

There is really only one constant in the development of a dissemination policy for government information on the law: the public's need and right to know about the law.

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6. The Queen v. James Lorimer and Company Limited {1984}1 C.F.1065.

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Mr. **Wise**. Thank you very much.

Ms. Dykstra, you spoke about the Crown copyright in Canada. It's not an unusual policy. Canada is not the only Government in the world, certainly, to have that policy. Could you expand a little more on how the U.S. policy has contributed, in your opinion, to the success of the U.S. information industry?

Ms. **Dykstra**. During the free trade debate, the use of the term "a level playing field" was bandied about on both sides of the debate. I think that above all public domain has provided for the information industry and the government a level playing field.

It has allowed the public's information interests to be best served by avoiding control by any side of the playing field. It has allowed the private sector to be as innovative as it wishes within its ability to generate revenue. And it has allowed the government to use its information access in the most innovative manner possible.

Mr. **Wise**. Mr. McCandless.

Mr. **McCandless**. I'm going to use this opportunity to—it's relevant but it's a little regional. You have the province of Quebec. You have the language of French. I understand they don't even have English road signs; is that correct? Well, they've gone almost that far as I understand.

Ms. **Dykstra**. It certainly is a very contentious issue. It is even more contentious than Crown copyright. [Laughter.]

Mr. **McCandless**. The sharing of information and the ability, in particularly your field, the legal field, of communicating is obviously very difficult. Now, we in the western part of the United States are beginning to see a similar type of relationship unfold with the Spanish language. And the fact that there is a need to have many things available on a day-to-day basis in our courts and communications in society that were not necessary a few years back. You can take the California driver's test in five separate languages. It is required by State law that they be available.

What advice would you have for someone who is beginning to experience this, who, as in your case, has had to live with it?

Ms. **Dykstra**. In Canada, Federal legal information has to be available in both of Canada's official languages. Although it was a practical problem at the outset of the implementation of this as a policy, I believe that we have, through trial and error and through a willingness to cooperate and a willingness to use innovative measures, we have found a way of dealing with all of the problems. It is simply not a problem any longer.

Our Federal statutes and regulations, as well as decisions rendered by the Supreme Court, the Federal court, and all courts under the Federal jurisdiction, are available simultaneously in English and in French. There is, of course, a cost to this, but we have solved the problems of the timely delivery of legal information.

Mr. **McCandless**. And there isn't a circumstance or a situation by which someone can test the interpretation from one language to the other as a result of where the court action took place; that's never become a problem?

Ms. **Dykstra**. Well, it has indeed been an issue in some court cases. We have developed over the years a body of accepted definitions and accepted translation standards. In many cases, we are producing legal information simultaneously in both languages as opposed to translating from one to the other. It can be solved.

Mr. McCandless. Thank you for your input.

Mr. Wise. Bob Gellman notes that this offers a remedy for all the messengers that were knocked out of work in the previous panel, who can now become translators.

I greatly appreciate the efforts and contributions of both panels. This is the second hearing that we've conducted. I do not foresee anything emerging in the form of legislation necessarily, but I do think that it is important that this committee keep an overview of what's happening with Federal policy, that we be in a position to offer recommendations for assistance and that we can improve access to federally held information. I thought that I gained a better appreciation from these two panels as to the proper role of both government and the private sector.

Ms. Dykstra, I greatly appreciate, and the subcommittee greatly appreciates once again your efforts to be here. As I said, you made quite an effort and presented us a good overview of some of the issues affecting Canada which also affect us. And I appreciate also your reference to the free trade debate because that information is part of that as well as manufacturing of goods.

At this point, if there is nothing else——

Mr. McCandless. I have an editorial here, if I may. I just have trouble in the future here in the United States of having more than one official language, without any disrespect for the ethnic background of anyone, but I would simply call to your attention—what would the cost be to publish the Congressional Record each day in a number of languages. This is a concern I have and why I took the time on the panel.

Mr. Wise. Fair enough. Although some of my constituents have read some of my speeches and they can't understand what I was saying in English. [Laughter.]

But at any rate, maybe that's a subject for another hearing, too.

Thank you very much and I declare this hearing adjourned.

[Whereupon, at 11 a.m., the subcommittee adjourned, to reconvene subject to the call of the Chair.]

CREATIVE WAYS OF USING AND DISSEMINATING FEDERAL INFORMATION

THURSDAY, JUNE 4, 1992

House of Representatives,
Government Information, Justice,
and Agriculture Subcommittee
of the Committee on Government Operations,
Washington, DC.

The subcommittee met, pursuant to notice, at 11:10 a.m., in room 2247, Rayburn House Office Building, Hon. Robert E. Wise, Jr. (chairman of the subcommittee) presiding.

Present: Representatives Robert E. Wise, Jr. and Al McCandless.

Also present: Lee Godown, staff director; Robert Gellman, chief counsel; Joseph Shoemaker, professional staff member; Aurora Ogg, clerk, and Monty Tripp, minority professional staff, Committee on Government Operations.

Mr. Wise. This is the third in a series of hearings on creative ways of using and disseminating Federal information. As with the previous hearings, our goal is to highlight enterprising, inventive, and imaginative ways people use—and agencies disseminate—public information. Enterprising, inventive and imaginative.

There are three objectives to these hearings. First, we will examine how Federal information is used by people who make genuine contributions to the Nation's economy and democratic processes. At earlier hearings, we had testimony from nonprofit and public interest information users, from Federal agencies, from libraries, and from the private sector. There is no shortage of Federal data users, and today we will add others to this mix.

Second, we will illustrate the importance of making information available in common computer data formats. Federal agencies, redisseminators, and end users all benefit when data can be easily reused.

Third, we will continue to look for innovative and inexpensive ways to disseminate Federal information.

There have been some positive developments that are covered in my statement, which I would like to make part of the record, but I will summarize them quickly.

First of all, the General Accounting Office, testified about methods for low-cost, low-tech electronic disseminating methods. It sounded good to me, so I wrote to the Comptroller General and asked why GAO was not using more of these methods for its publications. I am happy to say this Comptroller General has agreed that publishing information electronically is an idea whose time has come, and is now actively looking into using a variety of different technologies to disseminate information products. I want to thank GAO for its efforts in this regard.

Similarly, I recently wrote to the Administrator of General Services about the possibility of making information about Federal advisory committees more accessible. Currently, it is now impossible to use the thousands of pages of paper filings from advisory committees. I have been delighted at their response. Not often in an oversight subcommittee we use words like that, delighted and so on, but I have been delighted at the response, as they are now planning to transfer these records to CD-ROM. I anticipate this technology will improve oversight of the Federal advisory committee process.

There are other agency information products that can benefit from electronic dissemination. We want to try to nudge these agencies into the electronic age.

Our witnesses today all come from outside the Federal Government, and they will illustrate three very diverse uses of Federal data. Our first panel will focus on the Regional Contracting Assistance Center, located in Charleston, WV. The RCAC is a private not-for-profit corporation that supports economic expansion in West Virginia by offering services and programs designed to assist local businesses.

The West Virginia information connection, an electronic data base and information dissemination system, operated by the RCAC, includes Federal and State contracting information. I am very, very pleased to have the RCAC present at this hearing because I have been active in working to make projects like this succeed. It was apparent to me when I first came to Congress that my district and my State needed the type of economic development assistance, and very professional economic development assistance, that an organization such as the RCAC provides.

Providing our businesses, and particularly rural businesses, I might add, with access to information about new markets for goods and services is a first step. Similarly, providing others with information about businesses and facilities in West Virginia, or in any other area, is a very much needed asset that a rural State like mine can offer.

We have two witnesses from the RCAC: Walt Lapinsky is chairman of the board of RCAC and is manager for business development for the C&P Telephone Co. of West Virginia. Walt has been active in both economic development for his company, which is also extremely active in economic development in our State, as he has been a very aggressive chairman of the board for the Regional Contracting Assistance Center.

Accompaning Walt is Mick Walker, who is executive director of the RCAC, and who has done a tremendous job in working with Walt and the board in making the RCAC not only a leader in procurement, but, happily, recognizing there are many other areas, particularly information dissemination, that is crucial. He has made the RCAC a leader in spreading its wings far beyond the narrow area in which it first started.

The second panel includes two very different users of Federal information. Julia Wallace is managing editor for special projects at

USA Today. USA Today has pioneered the use of Federal electronic information as source for investigating news stories. Examples include reports on the savings and loan bailout, identification of pollution sources, using EPA's toxic release inventory data base, and identification of dangerous highways based on data from the National Highway Traffic Safety Administration.

We will also hear about the consumer protection network project jointly sponsored by the Reference Point Foundation and the National Consumers League. The project will use commuter and telecommunication systems to collect, to organize, and to make available information on telemarketing fraud to consumers and law enforcement agencies. Dr. Alan Westin will represent Reference Point, and Linda Golodner will appear on behalf of the National Consumers League.

By the time we are through today, we will have heard about business, consumers, and the press. I think that is a pretty good mix for any hearing and a pretty ambitious agenda.

I want to thank all the witnesses for their assistance in being here. I know it is hard on some of you to make this trip, but the purpose of these hearings are to publicize what is being done with information dissemination. I can't tell you there is going to be legislation emerging as a result of this hearing. I can tell you, though, that I think that what this does is to make government agencies aware of what can be done. This committee is going to continue to work to encourage those agencies to make it even easier for people to access the information that all of us as taxpayers are paying for.

I want to also thank my colleague, Al McCandless, for being here and for participating in all these hearings, and would turn to him for any opening remarks he might wish to make.

Mr. McCandless. Thank you, Mr. Chairman. I feel like the little Dutch boy with not enough fingers to plug the dike this morning. I happen to be holding down the, over at the full committee at Banking because we have a Republican conference over on the floor of the House, and I will have to get back to that.

Certainly, this is an important subject, but sometimes one has to make difficult decisions.

Mr. Wise. I appreciate that, and we will try to get the results of all those committees on CD-ROM for your review. Although do we want it disseminated? I am not sure. The caucus I just came from, I am not sure we do, but thank you.

Mr. McCandless. Thank you.

Mr. Wise. At this point, I would call the first panel, Walter Lapinsky, chairman of the board for the Regional Contracting Assistance Center and manager of business development for C&P Telephone Co. of West Virginia; and Mick Walker, the executive director of the Regional Contracting Assistance Center from Charleston, WV.

Gentleman, it is the practice of this subcommittee so as not to prejudice any witnesses who may appear before it, to swear in all witnesses.

Do you have any objections? If you would stand and raise your right hands.

[Witnesses sworn.]

Mr. **Wise**. Your written statement, in its entirety, has been made a part of the record already. I would invite you to highlight some of the new features that the RCAC is able to offer, and to stress what is of particular interest, I believe, to this subcommittee. That is the way rank and file businesses—those that do not have the capability to access or to know about government contracting opportunities or other opportunities that exist in the State of West Virginia—the ways that they can make use of this where previously they may not have been able to.

You might also talk about the implications of this nationally, because it is my understanding that many of the services that the RCAC is offering presently are, in some cases, the first of their kind in the country.

Mr. Lapinsky.

STATEMENT OF WALTER LAPINSKY, CHAIRMAN OF THE BOARD, REGIONAL CONTRACTING ASSISTANCE CENTER AND MANAGER, BUSINESS DEVELOPMENT, C&P TELEPHONE CO. OF WEST VIRGINIA, CHARLESTON, WV

Mr. **Lapinsky**. Thank you, Mr. Chairman.

Let me begin by saying I appreciate the opportunity to be here today. The mission of the RCAC is to create and retain employment opportunities in West Virginia through electronic information exchanges within our business community.

Over the last 5 years, RCAC programs for West Virginia businesses have secured more than $80.5 million in new contract awards, and have resulted in a retention and creation of 2,835 jobs. Within the next 2 years, RCAC's objective is to have 5,000 West Virginia businesses participating in an electronic marketplace where information can be exchanged easily between buyers and sellers.

Federal information is critical to the RCAC, and we are using it in several creative and unique ways through two programs. First program is the West Virginia information connection, the first publicly accessible electronic information source of its kind in the Nation. The second is the West Virginia bid network. It is an electronic distribution system for Federal and other contract opportunities.

RCAC's goal is to link West Virginia directly to a global marketplace by providing information to West Virginia businesses, by providing information to potential customers on West Virginia businesses, and to provide information for those involved in plant site selection or expansion.

The foundation for RCAC use of Federal and other pertinent information is electronic data interchange, or EDI. EDI is not only a means of exchanging information but the emerging standard for business communication in a global economy, which is another important resource imparted to West Virginia businesses. By harnessing EDI through the West Virginia information connection, State businesses are provided with tools such as pertinent contract preparation and performance information from other data bases, many of them Federal sources. This is important and timely information that allows small rural businesses to participate in new markets for products or services they produce.

There are seven major information resources within the West Virginia information connection that support West Virginia business or promote electronic expansion. These include the information connection's business vendor location service. It is an electronic directory of local businesses or manufacturing to distribution, and another directory contains information on local industry sites and buildings, and this is maintained by the State economic development organizations.

The second of RCAC's most important information service is the West Virginia bid network. Essentially, it is an electronic distribution center which provides local, national, and international contract opportunities, and it is through a computer, a PBX, or a fax machine. The bid network brings together buyers and sellers into one central information exchange system and demonstrates how RCAC is bringing new, oftentimes distant, market opportunities to rural business owners.

Federal bid opportunities, naturally, are prime information sources, and through the bid network, RCAC provides potential business leads and background from the Commerce Business Daily, the electronic bulletin boards in the Department of Defense, to foreign trade leads from the Department of Commerce, and the Canadian bid board to private sector purchasing organizations in West Virginia State government.

West Virginia information connection is being prepared for distribution to other States at the discretion of FmHA. These States include Vermont, Alabama, Texas, Mississippi, Tennessee, Wisconsin, and also we have been requested by Puerto Rico. A demonstration of this service is being planned for June 22 at Marshal Space Flight Center at Huntsville, AL. This is being put on for NASA, other Federal agencies, and prime contractors.

A new software system to allow easy access to RCAC's information services is under development, and Mr. Walker, executive director of the RCAC, will address this in his testimony.

The Federal Government can assist our efforts by continuing to provide data for use by the private sector in support of State directorate economic expansion efforts. The availability of Federal data on a wide range of technical and general topics is essential to creating growth for our business community. The Federal Government has the ability and the resources to gather and store information. The dissemination of this information can be done most effectively by the private sector and local development groups. Mr. Walker will address this in his testimony.

This concludes my remarks, and thank you for your time, Mr. Chairman.

[The prepared statement of Mr. Lapinsky follows:]

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Statement of

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Before The

Government Information, Justice, and Agriculture
Subcommittee
of the
Committee on Government Operations
House of Representatives

on

Creative Ways of Using and Disseminating
Federal Information

Thursday, June 4, 1992

Mr. Chairman and Members of the Subcommittee:

Introduction

My name is Walt Lapinsky and I am Chairman of the Regional Contracting Assistance Corporation (RCAC) and business development manager for the Chesapeake and Potomac Telephone Co. of West Virginia, a subsidiary of Bell Atlantic Corporation. With me today is Mick Walker, President of the Regional Contracting Assistance Corporation. We appreciate the opportunity to appear before you today to discuss RCAC, a private non-profit corporation formed in November of 1987 to promote the expansion and retention of West Virginia's existing business community.

The mission of RCAC is to create and retain employment opportunities for West Virginia citizens. Its primary functions are to provide direct marketing and technical assistance to small businesses, among them disadvantaged small businesses and minority-owned small businesses, interested in participating in the global marketplace.

Over five years, RCAC programs for West Virginia businesses have secured $80,646,630 in new contract awards resulting in the retention and creation of 2,835 jobs.

RCAC assists West Virginia businesses to identify, to competitively respond , and to responsibly complete market-driven contract opportunities available through 1.) federal, state and local governments; 2.) their prime contractors; and 3.) private sector purchasing organizations from throughout the world.

RCAC fulfills its mission through the electronic dissemination of information. Through the West Virginia Information Connection, seven "dial up" electronic information resources are available to support state businesses and to spur economic development. Through the West Virginia Bid Network, information on federal, state and private contracts are widely distributed to state business.

Together, these information resources promote the function called "electronic data interexchange" or EDI. I believe EDI is essential if West Virginia businesses are to compete on a equal basis within a global economy in which the ability to access and use information and information technology is crucial.

Worldwide efforts to move toward "paperless" procurement environments, computer assisted logistics systems and electronic distribution of product information requires that economic development organizations, such as RCAC, play an integral role in preparing local businesses for the eventuality of EDI as the standard for business communication throughout the world.

From my perspective as a telephone company manager, I also must point out that West Virginia enjoys a rare advantage as the so-called "Information Age" advances. Our telecommunications infrastructure is nearly all digital[1], and as such provides a unique resource in which EDI and other advanced telecommunications functions can thrive and prosper.

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[1] C&P's network, which serves two-thirds of the state's population, will be 100 percent digital by mid-1993.

Why RCAC was formed

West Virginia's economic structure has suffered dramatically over the preceding three decades. Dependence on the export of its natural resources, coal, oil and timber, coupled with contractions in the markets of two other major industrial components of its economic base, chemicals and glass, created a stagnant state economy.

In response to this economic hardship, West Virginia government, and corporate and individual citizenry, reacted in a proactive and coordinated manner to restructure the state's economic base. Public and private sector resources are being directed towards developing the capability to respond to market driven opportunities not traditionally pursued by West Virginia-based enterprises.

This focus results in the expansion of manufacturing, and manufacturing support capability, of West Virginia's existing business community, as well as the creation of rapidly emerging rural business enterprises who produce products and/or services unrelated to coal, chemicals and timber.

The development of a world class electronic data interchange infrastructure in rural West Virginia is a window of opportunity, and it is RCAC's intent to harness this new found manufacturing, service and construction potential and direct it toward emerging markets locally, nationally and internationally.

BRINGING THE WORLD TO WEST VIRGINIA

Information from the federal government and other sources come together in the West Virginia Information Connection, the first publicly accessible electronic information resource of its kind in the nation. It is the newest, and most original, business assistance device available to economic development or business assistance personnel, and the businesses they support.

WVIC's "on-line" capability to locate businesses and retrieve pertinent contract preparation and performance information from remote databases is unparalleled.

WVIC information resources are designed to provide timely and pertinent information to local businesses interested in participating in new markets for the products or services they produce, increasing competitiveness, or building "teaming arrangements" with other businesses.

WVIC was developed with funding from the Farmers Home Administration (FmHA), the Defense Logistics Agency, Data General Corporation, the Governor's Office of Community and Industrial Development, Appalachian Power Company, Monongahela Power Company, Wheeling Power Company, Potomac Edison Power Company and RCAC Inc. of West Virginia.

WVIC contains seven major information resources that can support business assistance efforts and promote economic expansion within local communities:

1) A **Business/Vendor Location System** – An on-line "Yellow Pages" of local businesses involved in manufacturing, manufacturing support, product distribution, services, research and development and construction.

The Business/Vendor Location System is a directory of "electronic brochures" that can be searched utilizing keywords (such as products or required services), Standard Industrial Classification Codes (SIC) or Federal Supply Classification Codes (FSC). The directory's inquiry capability can be further refined to limit search patterns based on the socioeconomic status relating to business ownership and/or by specific geographic location (city or county).

The Business location system is extremely user friendly because of its menu driven on-screen prompts and help capability. The user, therefore, requires no user's manual or any significant computer background.

The Vendor Location System serves three functions that are important to rural businesses and economic development organizations. It:

a) offers a fundamental tool that will allow a local community to promote its product/service support capability to purchasing organizations locally and throughout the nation.

b) affords local businesses an opportunity to identify and develop "teaming arrangements" with other local businesses.

c) serves as a manufacturing support location resource for rural economic development organizations attempting to attract light manufacturing. The system allows rural areas to pursue prospects relying on the manufacturing support strength of the larger, more industrialized sectors of West Virginia by offering those communities immediate access to information about West Virginia support industries capable of providing supplier support to that prospect.

2) **The West Virginia Bid Network** - An electronic distribution center that allows local businesses to electronically receive international, national and local contract opportunities.

3) A **West Virginia Bid Board** - An electronic information resource that provides a current listing of bid opportunities available through West Virginia based federal, state, and local government and private sector purchasing organizations, in support of the Governor's "Buy West Virginia" initiative. Updated daily, contract opportunities are displayed until the bid closing date.

4) **"Haystack"** -A product of Information Handling Systems (IHS) and its capabilities to provide technical specifications. Direct access provided to IHS and National Stock Number (NSN), that cross references part numbers and previous purchase histories for selected commodities.

5) **West Virginia Community Demographic Database** - Direct access provided to data on cities and counties within the state.

6) **Directory of Local Industrial Plant, Site and Office Buildings** - An on-line, current database that can be searched based on the end user's requirements for space, building type, etc.. It is maintained and updated, via modem up-link, by regionally assigned economic development organizations.

7) **Business Resource Directory** - Information relating to public and private institutions that can assist local businesses on any aspect of successful business operation, based on requirements provided by the end user.

The second phase in the creation of the West Virginia Information Connection involves the swift evolution of an electronic information distribution capacity within West Virginia's rural and metro business communities. The primary components of this project involve the development of personal computer software that allows any business, economic development organization or government agency in West Virginia to connect to the WVIC by modem through their personal computer or workstation.

The West Virginia Bid Network

The West Virginia Bid Network is the WVIC's sister program. It is designed to electronically deliver information to businesses throughout West Virginia. This software program, coupled with an EDI distribution system, identifies contract opportunities for clients contained within the *Commerce Business Daily*, all federal bid opportunities over $25,000, and Small Purchase electronic bulletin boards for the Defense General Supply Center, the Defense Construction Supply Center, the Defense Electronic Supply Center, and the Defense Industrial Supply Center.

The Network also supplies foreign trade leads from the U.S. Department of Commerce's TOPS program and the Canadian Bid Board.

RCAC recently added another important attribute to the Bid Network. This feature allows RCAC to electronically match its client's products and services to locally generated bidding opportunities. Through this program, bidding opportunities from West Virginia based DoD and Federal Agencies ($25,000 and under), federal prime contractors, local governments and private sector purchasing organizations can be electronically matched, based on the specific products and/or services produced by West Virginia businesses.

As an information distribution center, the West Virginia Bid Network is an opportunity to create an electronic marketplace capable of tying together all of West Virginia's business enterprises in one central buyer/seller information exchange system. This unique electronic marketplace benefits rural business enterprises because it "levels mountains" in providing access to markets that have traditionally been restricted by topography and geography.

Rural small business owners are electronically connected to all contract opportunities despite their location. Those business owners located in non-metropolitan areas will no longer be faced with the daunting task of traveling long distances to meet with potential customers. Similarly, rural business owners will have access to West Virginia sources of supply that traditionally have been next to impossible to find before the creation of the WVIC's vendor/business location system.

West Virginia Bid Network: Phase two

The West Virginia Bid Network is being further developed during phase II of RCAC's Gateway project. Through the creation of electronic information gateways throughout West Virginia, located in economic development authorities, chambers of commerce and private sector corporations, RCAC will communicate with businesses throughout West Virginia in minutes rather than hours or days.

The second phase will also involve distribution of software that will allow local purchasing agencies to electronically "up load" their synopsized bid directly to the WVIC, a prime example of EDI. Each night this information is combined with the electronic version of the CBD. Through electronic document exchange, RCAC clients receive not only those matches available through the CBD and DoD Small Purchase Program but also those matches based on the small purchase requirements of 24 West Virginia-based federal agencies.

The Business Support Centers and the economic development organizations that make up RCAC's West Virginia Bid Network are electronically updated in minutes with less than twenty phone calls necessary each night from the WVIC to information distribution gateways throughout West Virginia.

Within minutes of receiving this information, these local "gateways" begin hundreds of local modem-to-modem "dumps" of individual business opportunities directly into each business' personal computer.

Before they arrive for a new work day, West Virginia businesses have in their personal computers or on their fax machines electronically scanned, and selected business opportunities from the CBD, the Small Purchase Bulletin Boards of DPSC, DCSC, DGSC, and DESC, bids from West Virginia based federal purchasing agencies ($10-25,000 range), as well as all available contract opportunities form state and local governments and from other West Virginia businesses. This is a significant competitive advantage, accomplished without the extraordinary expense of mailings, printer ribbons, human resources, and the tons of printer paper created by traditional bid matching programs.

It is our intent that within two years 5,000 West Virginia businesses will be participating in the electronic marketplace. The job retention and creation possibilities are staggering. The WVIC's unique capability to link West Virginia businesses to information resources from throughout the world creates possibilities for technical and marketing assistance to rural businesses that have not been previously imagined.

Implementing Phase II

Phase II of the development of the West Virginia Information Connection system primarily consists of four steps.

1) Preparing the system for distribution to other states at FmHA's discretion.

2) Developing a PC based interface for the system that will allow all rural West Virginia businesses, purchasing organizations and economic development organizations "one touch" access to the system's capabilities.

3) Strengthening West Virginia's electronic data interchange infrastructure through the purchase and distribution of mode hardware and software that facilitates program objectives, and the sponsorship of EDI conferences and symposiums around the state to deliver the powerful message of EDI capabilities to businesses in rural West Virginia.

4) Electronic linkage of rural businesses to information resources available through the federal government.

Working with other localities

RCAC has been contacted by several states regarding the availability of the WVIC for importation to those states. Puerto Rico and Vermont formally requested that the system be provided for use within their communities. Alabama, Texas, Mississippi, Tennessee and Wisconsin have also expressed interest in acquiring the WVIC's unique rural outreach capabilities. RCAC and FmHA are more than willing to share this unique technology, however, "porting" of this software to other hardware platforms will require substantial work to prepare the system for that eventuality.

The WVIC was developed utilizing 45,000 lines of "C" code and requires further documentation and testing to achieve sufficient reliability for easy distribution. Extensive review of the design and code will aid in identifying portions of the code that are not easily portable to other hardware platforms in use in other states that FmHA may wish to have this system.

It is our belief that this exportation of technology will benefit both West Virginia and FmHA. It is our intent to sign reciprocity trade information exchange agreements with each state, thereby creating even more market opportunities for rural West Virginia businesses. This enhanced electronic opportunity to compete outside West Virginia's borders will create enormous job creation potential for our business community.

PERSONAL COMPUTER INTERFACE

The WVIC is currently accessible to anyone possessing a modem and a terminal/terminal emulator. The proposed PC Interface software program will further simplify connection and access to the WVIC and West Virginia Bid Network.

This PC interface will be a menu-driven, front-end system providing transparent connection to the WVIC. This approach will allow screen control and logic processing to reside on the PC end, and extensive menuing and search capabilities. The WVIC in essence becomes a remote server providing remote data to the PC of the rural West Virginia user.

This leading edge, transparent connection solution will decrease the response time normally encountered. With pre-determined protocols built between the WVIC and the client's PC connection, data access and file transfer become simple-to-use features for almost anyone.

Access to the WVIC using a terminal or terminal emulator will remain an integral part of the WVIC. The PC interface is an attempt to build on the available processing power of the user's computer to enhance ease of access and utilization of the system for the end user.

The development of this user friendly system will promote utilization in rural West Virginia. FmHA monies will be used only to transfer this capability to businesses and organizations located outside of non-eligible areas such as Parkersburg, Charleston, Huntington, Wheeling, Weirton and Fairmont. Funds provided RCAC by Department of Defense, the State of West Virginia, Marshall University and the private sector will be utilized to transfer to businesses located in those metropolitan areas.

Conclusion

Rural America, in many instances, has been denied equal access to the power of electronic data interchange. As such, it is incumbent upon statewide economic development organizations to bring about change so rural businesses have access to federal information and the overall power of information through electronic document interchange. Federal information resources are a prime and critical part of bringing the power of information to rural American, and encouraging the participation of rural small businesses in the global economy.

Mr. Wise. Thank you very much.

Mick Walker, the executive director of the Regional Contracting Assistance Center. Mick.

STATEMENT OF MICK WALKER, EXECUTIVE DIRECTOR, REGIONAL CONTRACTING ASSISTANCE CENTER, CHARLESTON, WV

Mr. Walker. I would like to thank the committee as well, and I guess it leaves it to me to bring the point home as to why we bother to do this. The real point is, and the exciting part about electronic data interchange, is that it levels the playing field and allows businesses within rural communities to get on the same level, in terms of information, with businesses who have the resources in the major metropolitan areas.

Our particular program at RCAC was really devised based on the same idea you have in the ATM system within the banking community. I know a long time ago, or not really that long ago, 10 years ago, it wasn't even fathomable you would be able to go into banking resources from a credit card inside your wallet. A modem acts much in the same way as a bank teller card does, by allowing businesses to access information resources from throughout the world. It gives businesses chances to go into all kinds of different data bases and to electronically link up with trading partners from around the world.

As you know, West Virginia is a very mountainous State that is divided up, because of the topography, into a bunch of different geographic areas. That topography creates problems in terms of allowing the businesses themselves to interact with one another. Before the days of advanced telecommunications and of electronic information exchange, it was difficult for businesses in rural economic areas, or rural areas of West Virginia, to participate actively in all the things that are happening in the world.

As the world shrinks because of telecommunications advances it becomes imperative that businesses, and economic development corporations, and governments take an active role in creating opportunities for businesses, no matter where they are located within the United States, to participate in world class information resources.

The RCAC project is much different than some of the data bases that you have heard about. I hear people all the time saying a data base is a data base. That is certainly true, except for one thing about the RCAC data base, and that is we have taken a totally different view as to what our vision is and have made our data base accessible, or the information resources that we have developed directly accessible to the businesses of our State.

We have done that by using something that the Japanese are quite familiar with, quality function deployment. That involves going out to the customers, finding out what the customers mean to the small business communities, and the business communities we are dependent upon, what they are interested in in terms of information resources, and then going out and finding those information resources and bringing them directly to the people that are most affected by them.

The RCAC system was designed to promote EDI as a normal way of doing business. It is imperative that all States and economic development corporations begin to help their businesses understand EDI as a normal way of doing business.

The West Virginia information connection is a modem-linked system that allows businesses to find out things that are really important to them. When they log onto the system, a single sheet of paper is their entire owner's manual. That is not what you normally see in terms of data base manuals, where they typically have pages and pages of things that technocrats have written that supposedly allow businesses to gather information.

What we have done is reverse engineered that philosophy. We find out what is available in particular data bases, and allow our computer to do the searching for the businesses in a transparent way, the businesses don't even know what type of data entry procedures that are being performed.

The system was developed as a simple way to do something that I think the political process is discussing. That is promoting engagement. The problem in West Virginia, and in the rest of the United States, is that most of the business owners and the small businesses that make up the predominance of the businesses in the United States, are not engaged actively in electronic data interchange.

No matter what the Federal Government does in terms of putting together different types of information resources, typically put together by technocrats, the small businesses, once they log on to them, find out they cannot get the actual information they need. So we have gone out as an economic development corporation and created an opportunity to actually get that information for them with very little effort.

Now, I wanted to talk specifically today about one of the three information resources that we use from the Federal Government. That is the Commerce Business Daily. I guess all of you are familiar with that publication and we get it in electronic format. The problem with the Commerce Business Daily is its volume. If you are a small business person, this yellow magazine, which all of you know, is full of all the Federal contracting opportunities, and it comes out every single day.

What we have done is purchased Commerce Business Daily from a vendor out of Texas, and that vendor in Texas then allows us to electronically scan the CBD for businesses based on their capabilities. I pay that vendor $12,000 a year to do that service for me, and I provide that service to 3,000 businesses in West Virginia.

The Commerce Business Daily, for a business to buy, is about $200 a year. I can disseminate it in West Virginia to 3,000 businesses for $4 per year. That is because of the power of electronic data interchange; the power of pulling down this particular magazine, having it read for the business, so that it goes through and finds out which ones are important to them, and then directing that electronic transmission throughout our State.

We have gone about setting up electronic gateways all through the State, where information comes into Charleston, and we disseminate that information to Morgantown, Martinsburg, various central points throughout the State, and then it is electronically dropped right into the modem of businesses throughout West Virginia.

We have also gone about purchasing modems for businesses in West Virginia and giving them to those businesses on loan. We were using Farmers Home Administration money and money from the Department of Defense to do this. The idea behind Farmers Home participation, and Department of Defense's participation, is that they would like to get the information that they have available directly to the businesses, rather than going through central repositories.

For instance, we pull down bid boards from six different Federal agencies and combine them into one information resource and then distribute that information from those six bulletin boards to all the different West Virginia businesses. It is a radical departure from the idea of simply making information available. It is more aggressive, forward thinking in terms of getting information to businesses.

I think the Federal Government, in many circumstances, because of its power to gather information and to store it, lets the information simply sit there and then says, well, here it is, you can come get it if you want to. The different Federal agencies all have different formats. And so, for the average small business person or business person even with large companies, like McDonnell Douglas and Motorola, they have a tough time finding out where and how to get the information. They have to hire cadres of people to be able to actually pull the information out from the Federal Government.

One of these information resources, and one of the points I wanted to make, is that RCAC has reverse engineered data bases that are very sophisticated, and one of them is Haystack, which is an information handling services product out of a company in Englewood, CO.

That particular data base is very, very difficult to use. The user's manual is about 700 pages long and it is about that thick. It is a useful data base written by software engineers who have given it a powerful search capability. However, if you are a business person and you want to go into that information resource and you are busy, you cannot spend the time to go through the 700 pages to figure out how to get the information.

The same holds true for people from the Department of Defense. The Department of Defense out of, the DCASR—Cleveland region, is going to be logging on to our system to get to their own information.

Mr. **Wise**. Just for the court reporter, you want to spell that acronym out; DCASR?

Mr. **Walker**. Defense Contract Administrative Services Region. They are an organization located in Cleveland that needs this information from the Department of Defense. They have the information in a wide breadth, and they can go into their individual systems and pull this information out. But what they found out is that it is almost impossible. One of the people there said it takes 27 different key strokes to get to the information that they are looking for.

Now, Information Handling Services, which is a private corporation, buys its data from the Department of Defense, reformats it into a little bit less mindboggling thing, and then we reformat it and allow the Department of Defense people to log directly on to our information system in West Virginia, simply asks us, this is the information I need, and then our computer goes out and logs on to the sophisticated computer system in Colorado. Our computer tells the other computer exactly what the information is that the person needs. Does all those key strokes in a matter of microseconds, and brings the information back, rather than the Department of Defense person going through their own individual computer to find the information.

As I talked to other Federal agencies, whether it be Department of Agriculture, FmHA, or any other, they say the same thing. When it comes to getting information out of their own information systems, it is very, very difficult.

So what we have done with the information connection is a radical departure. We presuppose it will be difficult for businesses to understand the way a data base works. So we hire people who understand how those data bases work, reverse engineer it, so all the business has to do is tell us the information they are looking for.

What this means is that, as we move forward with our project, not just with the Department of Defense but other Federal data bases, we will hire people who can figure out this is how the data base works and then go out to the customers, who are the business communities, or the farmers, whoever needs that information, find out what information they will need, and we will modem link them to our computer.

Our computer can be accessed throughout the United States. They can simply type in the information they need, like you go in and say "I want $10," and then our computer will electronically call out on another modem, log onto that particular data base, search, using its inherent intelligence, and bring back that information to the business community. It is a much simpler and faster way to disseminate information, it is much faster, and is a radical departure from a data base.

So one of the things I wanted to say today is that RCAC's West Virginia information connection is not a data base, it is an information resource center. It is unmanned. In other words, there is not a human being that sits there. It "stays up" 24 hours a day, and people can get various types of government information.

Mr. Lapinsky covered the seven different areas that we cover in our data base, or not data base, but our information resource. But I want to say that as we go through this, I know you have questions, Bob, that there is, I think it is extremely important, in today's global economy, that we pay particular attention to helping businesses get information. Information is power, and information allows our business community to be world class competitors.

Sometimes big businesses have the capability to do this type of thing because they have the resources. The real problem is the shrinking of information availability to rural resources, to rural areas, and even to inner city areas, like Los Angeles. As emerging small businesses are "grown," they need access to world class information very rapidly, and systems like this are very important.

Systems that are available from the private sector that we can go out, as economic development corporations, and grab and put out to the business community will definitely, I think, make a difference in economic recovery in America. I think that information interchange will be much better than an economic treat, like the Europeans are trying, information availability can pull America together.

As somebody who has lived in Arizona and all across the United States, this problem of lack of information is the same everywhere, not just in West Virginia.

So what can the government do to help us? I have three suggestions I would like to make. First, while the government has a great capacity to collect and store information, it needs to set up opportunities to allow the business community to engage that information so that it can use it to create wealth. That is the central thing that the Federal Government can do. It has an enormous capacity to gather information, but it cannot determine for the customers—meaning the business community—how they are going to use that information. They need to just make it available, and then the business community can decide how best to use that information to create wealth, which means jobs for America's communities.

The second thing is that the Federal Government, in my estimation, and many of its agencies, are trying to put up bulletin boards in a haphazard way. In other words, it is very difficult for me, as an agency, and I understand bulletin boards very well, to find out all the information that is out there. There is no centralized directory to tell me if I have a problem, a crop problem say, what data base I need to go into to find the information assistance I require.

So if the government could create an electronic resource, or a resource that would allow us to know what type of information is available, how that information is formatted and distributed, we can use the recourse to distribute information to the business community in West Virginia or California or wherever it happens to be in the best interest of economic growth.

The final thing I have is that much of the information we receive from the government is inaccurate. In other words, the information is wrong—I have something here in the Commerce Business Daily today, where the information that they have printed is not correct. For instance, the example I have is, a bid opportunity for land surveying, and it is actually the USDA out of Harpers Ferry.

They placed it—the Commerce Business Daily is divided into different sections which allows the business to go to their appropriate section. This is placed in section X, and section X is for lease of properties, but yet a land surveying contract opportunity has been placed in this area. This problem is due to Department of Defense's change of their numbering system over 2 years ago. And many of the Federal agencies still have not changed the numbering system themselves.

So they are still providing information to the business community that is inaccurate and false, and the best computer can't get around that. I think an important point is that, and the point I am trying to make, is that government agencies need to recognize where that information is going and that they have a responsibility to make sure that that information is accurate so that the business community can use it.

I think the Commerce Business Daily is something that is mostly a social economic tool and not a tool that is really meant to help people do business. So it has become a rogue activity. The government just puts it out and says, "good luck," I hope you can find it.

I have called Federal agencies several times on inaccurate information inside this particular publication, and their typical response is, we have enough competition so we don't need to retract it. The information is incorrect. And I am always, like, I don't think you understand the situation very well. But to move a large organization and get them to retract that information is very difficult, because they are caught between the social economic responsibilities of free and open competition and their real responsibility, which is to purchase that particular commodity as quickly as possible.

So I think if these three things were done—I know I have gone way over my time—but if these three things could be done, it would be very important, and I think—I commend the committee for doing this, because I happen to believe, and I told the staff this before, that EDI is probably the most important thing that is happening in America today.

If you think about the system of using the banks. I mean in 10 years information is going to be done this way and that is it. There is no going back. America must get on the bandwagon and America must move forward to create this particular capacity within its business to business infrastructure.

Thank you.

Mr. **Wise**. Thank you very much, Mick.

Actually, I was interested in your last point because the witness in the next panel makes the same point about the accuracy of information.

Let me ask some questions. You referred to, and I have referred also, to rural businesses. But this program and what you are doing actually is applicable, I believe, to small businesses generally. Whether they are urban, rural, or suburban, those businesses that may not have the resources, either in personnel or finances, to get the information that you are talking about, to track and monitor daily what procurement opportunities are. Is that a fair statement?

Mr. **Walker**. It is a very accurate statement. In West Virginia, our interest is to electronically link all our businesses together. I think America must do the same. We must get our businesses talking to one another, not just about opportunities they may have but also about their capabilities. Interchanging that type of information is essential.

So, as far as West Virginia goes, we have a lot of large corporations that play a part in our program, because we can disseminate the information to them very cheaply, and if they have to go out and do it themselves, it is quite expensive.

The expense isn't the real program. We are trying to have businesses used to their computer transmitting information to them from their customers that they can respond to. Because that is the way it is going to be one day.

The real point—one of the other problems I have with the Federal grant system, is that the Farmers Home Administration money that paid for this particular system is not supposed to be utilized, by their regulations, for large cities. So, theoretically, we have to exclude Huntington and Charleston from this process.

And I think that is a dumb rule, because what we really need to do to help the rural businesses is link them to the metro businesses. That is the point. That is where the opportunities are. So when a Federal agency, because of some rule, says you cannot do this, it defeats the whole purpose and creativity we are trying to create, which is what you are talking about, whether you are a small business, large business or not, you are an American business and you have the opportunity to find competitive information through electronic data interchange.

Mr. **Wise**. Small business, I am sure most small businesses nowadays have computers, but I am not so sure about their using modems and communication software. How much training is required to get onto your system?

Mr. **Walker**. Very little. As a matter of fact, what we are finding, surprisingly, and I have to relate a small story, is that as I go out and speak around the State and talk to businesses about this and we show the system live, it creates a great deal of excitement, whether it is in Jackson County or in the heart of Huntington. Jackson County is a rural economic area of West Virginia.

But it creates a great deal of interest, what we find is that businesses do, in fact, have computers. Lots of them do have modems as well. The problem is, they have never used them. Now, the ones that don't have a modem—because there has never been a reason; there has never been a point.

Businesses only log on to things that will make them money. They don't want to play Nintindo or any of that other stuff. They want to make money. So unless you create an information resource which allows them to make money, they have no reason. Now, in our system, what we have done is, we have created something that every time a business logs on our system they make money. If they leave our system and feel like they have not made money then we failed.

So businesses are clamoring to get into our program. They are buying modems. Now, we will give them away, because we know there are some people who don't—well, we don't give them away. I shouldn't say that. We lease them to them in a sense. We give them to them, and when the business is tired of the modem and graduates from our program onto other things, they give them back to us and we give them to another business.

So it is like getting used to the ATM system. Everyone thought the ATM system would fail, even the banking industry thought it would. But today could you imagine living without it? But your point is well taken in that we need to get the communications infrastructure where it will allow businesses to participate.

It is critical that a business, no matter where they are located, has the ability to get world class information, because they will be providing the employment opportunities for the future.

Mr. **Wise**. Mr. Lapinsky, I am going to serve you a softball question, and I understand that, but it is also relevant to what we are talking about.

You referred to the West Virginia telecommunications advantage in our State. What I would appreciate is if you would elaborate on the significance of the digital network in place in the State. But the relevance, particularly to today's hearing is, is that something crucial to what the RCAC has done; or is it possible to replicate the RCAC in other areas that may not be as significantly developed?

Mr. **Lapinsky**. Yes, Congressman, the infrastructure for telecommunications is very important. Anybody familiar with West Virginia knows the terrain there, and what the infrastructure in West Virginia has done to our communities is level the mountains, basically.

Before, we had areas of the State that were not familiar with what was going on in other parts of the State, and, basically, what this has done is linked it all together. Today, if you make widgets, and you are in one portion of the State, and a large corporation is looking for those widgets, the next morning, when you come to your office, you will know about it. It does not guarantee you the contract; however, it lets you know they are looking for them and it gives you an opportunity.

So what, basically, the telecommunication infrastructure has done to West Virginia, is put it on a level playing field with the Nation.

Mr. **Wise**. But now if I am in another area of the country that does not have the advanced fiberoptic and digital structure that West Virginia does, am I still able to access something similar to the RCAC?

Mr. **Lapinsky**. Yes, this system, in fact, is available to anyone. In fact, what we have tried to convince some of the prime contractors that does business with the Federal Government, and that is you don't have to go to West Virginia to see what we have to offer to you. Just dial up the number we provide to you and you can look at the capabilities of any business in the State of West Virginia.

So it can be used by anyone, and that is because of the infrastructure in the State of West Virginia. Although, I would like to say that there are a lot of States that do not have the digital capacity our infrastructure and telecommunication has in West Virginia and the fiberoptics. This system is set up so that it is compatible with any computer and it is available to anybody that has a telephone line. So it is available to the Nation, basically.

Mr. **Walker**. Mr. Chairman, I would like to elaborate on that a little bit.

As a matter of fact, all these States we talked about that will participate in this particular program have logged on electronically from their machines no matter what they happen to be.

The global significance is that, we had Puerto Rico logged on to our computer in Charleston, WV, talking to another computer in Englewood, CO. If you think about the global significance of that, that is a very, very important thing.

Puerto Rico's real interest, and the reason they wrote to the Farmers Homes Administration, is they have to find some way to get the information out in electronic format. So I think telecommunications, as a whole, has come a long way, and data communications, that modems make it possible, no matter how bad your lines are in central Mexico City, if you have that modem, and you plug it into a computer and you get onto a telephone line somewhere, you can get to wherever that information resource has to be.

I think other States will follow along and will put their information together in a similar format.

Mr. Lapinsky. Mr. Chairman, I would like to elaborate on one thing, too, that he is talking about. We keep referring to the FHA and their involvement, and I want to explain exactly what that is.

When we elected to put this data base together, or this system together, we really did not have the funds, so we looked for a grant, and the grant came through the FHA. So when we had the requests from these States, once they found out what we had to offer, naturally it was paid for by taxpayer dollars, so we wanted to make it available to the Nation, but we suggested they go back through the FHA so that they could control it to some extent.

So that is the reason we keep referring to the FHA. They provided the funding for the grant to help us establish this system.

Mr. Wise. Your funding, I believe, it was probably the first of its kind for Farmers Home in this regard, wasn't it?

Mr. Lapinsky. Yes, it was, plus we had the private sector. In fact, the computer that maintains this data base was contributed to us by one of the large corporations.

Mr. Walker. Data General Corp.

Mr. Lapinsky. Data General Corp.

Mr. Walker. And you are right, and I want to commend FmHA, because they took a great risk, in terms of allowing this project to go forward, because it was something they were not used to.

And, of course, you know you were involved in that, in terms of getting them to see this was not a traditional use of the money, but it has actually a better impact in rural West Virginia than many of the other programs they are trying to do.

The system is very cheap. We are talking about $35,000 here. We are talking about an information resource that touches 3,000 businesses every single day that was built for $35,000 worth of Federal funds. We are not talking $500,000 or $1 million. It is a very simple system based on the simple premise that businesses want information. That is the way it is set up. Not hard.

Like I said, the user's manual is 1 page. You can make it all the way through—if you can log on, you can make it through without any help. No help menus, windows, or anything else. Businesses want information; they want it fast and they want it easy.

Mr. Wise. I think you also mentioned something else that is significant. The Regional Contracting Assistance Center, as a nonprofit corporation, does receive Federal funding. Yet it also is supported in other ways that I think are important to bring out. Because what has struck me about the RCAC, is that it is able to fill the needs of different segments of our community, whether it is the private sector, the State government, or the Federal Government.

So while it has Defense Logistics Agency funding in it, it also has some other funding sources. You might illustrate that, because I think that is helpful in terms of many different groups coming together to disseminate information.

Mr. **Walker**. The project, as a whole, is funded significantly by the Defense Logistics Agency, and I will address that at the end some of the problems with that. Primarily, the money comes from the State of West Virginia and a lot of private sector corporations, like Union Carbide, C&P Telephone, AT&T, big companies in West Virginia that are interested in helping West Virginia grow.

First, they want to help West Virginia, but they also want to see West Virginia grow so they can sell people more power and more telephone service. The way it was put together is very interesting, in that this whole process is supported by public and private dollars working as a team to get information to West Virginia businesses very, very rapidly.

To be quite honest with you, the response has been outstanding. I think the reason is because we have tried to keep it "customer focused." We have tried to remember who the people are that we are working for, and that is the businesses and the people of West Virginia; and we constantly had the people of West Virginia involved in this system as it was developed and deployed.

We have copied the Japanese in terms of learning how to put something out that will work, rather than trying to sit around a room and think what will work, and then deploy it and say, oops, it didn't; let's fix it. So we have been very, very careful. That is why, I think, without having the private sector sitting in on the meetings knowing what is going on, without having the Department of Defense involved in this particular project, that it would not have been as successful as it has been so far.

The minute someone touches it from another State, meaning electronically, they realize very quickly what the system will mean for them, and for very little money, in terms of a Federal investment.

Mr. **Wise**. In terms of information dissemination, you mentioned, and other witnesses are going to mention, making it easier to get information from the Federal Government. It sounds like your experience is that with each agency in some ways it is "roll your own," and there are a variety of responses, and a variety of formats. Accessibility varies.

Do you have any—and you made some suggestions, I just wondered whether you had any others you would like to make—about how the Federal Government can make it easier? Also, should the Federal Government be supplying some information directly that presently you are having to get from a third party that is reformatting it?

Mr. **Walker**. I think it is very difficult—to the Federal Government's defense, it is very difficult with all the information they have to put something out that will satisfy individual customers. I think, yes, they should make the individual information available in some type of standardized format, so that organizations like ours can either get it directly or go through a value added vendor.

I have no problem with paying for data that value has been added to. I do have a problem paying for government information that no value has been added to and it has simply been a function of someone saying, OK, I will put it in my data base and my format and now I will sell it to you, and you cannot get it directly from the Federal Government.

One of the things I think is a problem in terms of how the Federal Government has deployed its EDI project, is that it is on all different types of electronic formats. If you go in the Air Force's small business bulletin board, it is on the Genie information service. If you go to other DOD resources, even within the Air Force Logistics Command, they are on Compuserve or Telenet. And that is ridiculous, if you are a business trying to find out where all these information resources are, and then you have to subscribe to Genie, you have to subscribe to Compuserve, you have to subscribe to Telenet. You have to do all this stuff just to get to the information.

I think the only people in the world that work harder than Congressmen are small business people, in terms of the number of hours they have to spend at their job. I go out there and I visit them—and I don't have enough guts to be an entrepreneur—but I see them out there working 10, 12, 13, 14 hours a day to make their business go, and they don't have time, quite frankly, to figure out this whole mess.

So my job, then, as a person who is paid by taxpayer money, is to find out how I can get this information to them with the least possible pain. And I think that, to go to your question, I think the government can't do that, because there are too many different types of people, so that the information has to be pushed down to the lowest level possible. Whether that is done through the private sector, I don't have a problem with that, but if I can find out, like I said, just simply where the information is, and I think the people in California, Tennessee, or Nevada, if they could find out where the information is, they are very smart people, they can figure out how to get it to their customers, like the people in Charleston can figure out how to get it to our customers.

We are very interested in pushing that information capability to the lowest level, because businesses in different geographic areas have different needs. I think it would be impossible to ask the Federal Government to satisfy the needs of every single user of any type of government information. It would be an astronomical task. But they should, again, not simply let private sector vendors come in and get the information and resell it with no value added.

It is not—the system I talked about out of Colorado is $100 an hour for Haystack. That is how much they charge me, $100 an hour, every time I log on to it. For a small business to use the Air Force bulletin board, it is $18 an hour on top of long distance charges. That doesn't go to the Federal Government. If the Federal Government wanted to create its own Compuserve, fine.

And I certainly don't have a problem with Compuserve or Genie. All I am saying is that if I am a small business and I am trying to find out government information, it is almost as tough as trying to figure out what agency buys your product. It is a difficult situation and we have to standardize and we have to get competitive in this Nation, much the same as the Europeans are trying to do. We have to do it in America.

Mr. WISE. Well, I want to thank both of you very much for your assistance and also commend you on an excellent job. The RCAC has grown far beyond the leaps and bounds of those who were involved in its initial creation, and I think the tribute to that is the two witnesses sitting at the table.

I also think it provides a useful example for much of the rest of the country. I am glad to hear that other States are looking at it, because as one of you stated, and you are absolutely correct, this is where the future is. One day—actually, it is already here—transactions will be done without paper, and that it is crucial to be able to be involved in that.

I also see what you are doing, Mr. Lapinsky, in terms of the telecommunications network, the digital network, and, Mr. Walker, in terms of the information provided through the RCAC, will benefit a lot of areas that are never going to be served by modern four-lane highways, modern jet courts, seaports, or rail systems. Yet what this does is to make it possible for a business in rural Roane County, WV, to access and operate in the same way as a business in downtown Washington, DC.

They both have the same access to the Federal Government, they have the same access as far as selling of products. It gives everyone the information. Somebody once said information is power. Information is also equality and ability to compete. I just want to thank you very much for what you are doing to make that possible.

I call the next panel. The next panel will consist of Ms. Julia Wallace, managing editor for special projects of USA Today from Rosslyn, VA; Dr. Alan Westin, chairman of the Reference Point Foundation, Teaneck, NJ; and Linda Golodner, president of the National Consumers League, Washington, DC.

So as not to prejudice any witness that may appear before the subcommittee, we have a practice of swearing in all witnesses. Do you have an objection to being sworn? If not, will you stand and raise your right hands.

[Witnesses sworn.]

Mr. WISE. I want to thank each of you for appearing here today. Your written statements in their entirety have been made a part of the record.

Dr. Westin, I want to thank you. You are a frequent and very helpful witness to this subcommittee, and you have appeared before us before and have provided insight.

I want to express my appreciation for the well-crafted statements that all the witnesses have prepared and look forward to hearing your testimony. Why don't we simply go in the order in which you were listed, and so we will begin with Ms. Wallace.

STATEMENT OF JULIA WALLACE, MANAGING EDITOR, SPECIAL PROJECTS, USA TODAY, ROSSLYN, VA

Ms. WALLACE. Thank you. Good morning. I am Julia Wallace, and I am managing editor of special projects at USA Today, and I am here to testify today about USA Today's use of U.S. Government computerized data.

Our special projects department has been in operation for approximately 4 years. It is the largest data analyzing operation in U.S. journalism. We have learned, often the hard way, about the myths and realities of computer-assisted journalism.

In an era when citizens feel overwhelmed by complex issues, the public needs analysis and context to bring these gargantuan subjects into focus. This is not the journalism of unnamed sources or leaks. It is clear, on the record, and the sources and methods of analysis are documented.

The brute force of the computer makes its possible to perform an astounding number of rankings and matches that would be totally impractical for anyone searching paper records. Newspapers have used computerized records for many years, for example, to name a State's 10 drunkest drivers; but the most useful applications combine that power with analytical skill. Merely printing data is like printing the phone book. It is analysis that makes the news.

Just last week, using computer data filed with the Federal Deposit Insurance Corporation, USA Today analyzed the financial health of each federally insured bank in the country and printed a State-by-State list of troubled banks. It showed that problems in many States are leveling off. It also showed that Citibank, the Nation's largest, is among the most troubled banks in the country.

The administration, of course, keeps it own list of banks. It does not make these lists public. We provide a service that readers would not otherwise receive.

In our 4 years as a department, this is just one of many of the stories we have reported through analysis of government records. Among others, we learned that the most dangerous stretches of interstate highway are not in the crowded urban centers of the east, but on the lonely segments of the west, far from law enforcement centers or emergency medical help. A stretch of I-84 in Cassia County, ID, had the most deaths per vehicle mile in 1988 to 1989.

Through another analysis, we found the USA's most ethnically diverse metropolitan area had moved. In 1980, it was Miami; in 1990 it was Los Angeles.

Working with 1990 Census figures, we found that the Federal agency most successful at reducing housing discrimination in the private sector has been the Department of Defense. Our analysis found that metropolitan areas with nearby military installations are the least segregated in the country.

It sounds very easy to say we obtain data—in the form of magnetic tapes or compact discs or via computer modem—from this or that agency, mixed it with our own information and analysis to produce a report, but it is never that easy. Federal agencies, sometimes by inertia, sometimes by design, have placed formidable barriers in the way.

First, there is the problem of discovering what data are available. There is no central government catalogue for Federal data bases. There are some commercial catalogues for sale, but they are inadequate and quickly outdated. This is much like having a very expensive public library without a card catalog. Fair access requires a better system of discovering what is available.

Then there is the nitty gritty of getting the right computer tape and understanding its format and layout. It is often not easy to find the person or department responsible for gathering and distributing the data base. Then we must find someone within the agency familiar enough with it to help us interpret the data. No data base ever speaks for itself.

A computer tape handed to us without a clear layout and explanation might as well have top secret stamped on it. For example, we requested a data base from the Nuclear Regulatory Commission and were told the agency did not possess such a file. One of our reporters learned the NRC had issued a contract to purchase the very data we requested. So we knew it existed. Finally it came to light that the person who understood the data had left the NRC and no one else was available who knew how to deal with it.

Sometimes the barriers are not so innocent. The response we get is plainly obstructionist. The Resolution Trust Corp. had lists and descriptions of all property it was selling as a result of the S&L bailout. We asked for this list in computer form so we could do analysis. We were told it was not available electronically. We knew this was false. On paper, the lists filled about six telephone book size volumes. It had been printed on a dot matrix printer, so we knew it was on computer somewhere.

We decided to see what it would cost to have that paper copy input. The bid was $15,000. It would have cost the Federal Government less than $100 to copy the computer tape; a fee we would have paid. This brings us to the matter of cost. Electronic data should be available at a reasonable price.

Now, a less obvious problem I would like to touch on. Once a reporter learns of the existence of computer data and we obtain the tape, there is always a lot of cleaning up of the numbers. Some agencies provide very clean tapes. For example, the FDIC tapes on banks and savings and loans are very accurate; however, others are riddled with errors—mistakes made by the people filing the reports or made by the government agency.

For example, the EPA toxic release inventory of 1987 was contained in a computer tape released in March 1989. Our series ran in August 1989. By December of that year, the EPA had made some 20,000 corrections in the data. The errors came from processing, from inputting, or from factory supervisors who filled in the wrong numbers in the first place.

Here we have a key problem. Errors. The data must be accurate. All of it must be accurate, not just the parts for an agency's internal use. In data analysis, there is no such thing as close enough for government work. It is either right or wrong. Government recordkeepers need good training and clear explanations of what needs to be filed, and they need to have good cross checks to find errors.

One way to eliminate many errors in data bases is double entry. Have two people enter the numbers and let the computer check for cases where they fail to match. We use this system when we create our own data bases.

Let me be clear about this. I am not proposing any law or regulation to require Federal agencies to meet some arbitrary standard of accuracy before releasing computer-readable data. The mere knowledge that data are accessible to the public is a powerful incentive to get it right, and responsible news organizations and others will always go beyond the computer-generated information to look at the fallible human beings behind it.

We believe strongly that the demands of the public and the information marketplace will relentlessly push all of us—journalists and government data collectors alike—to improve accuracy. Here is a case that illustrates that point.

In 1989, we were looking at the FBI uniform crime data from large cities. We began to do a crime-by-crime analysis, and when we looked at felony assaults, Youngstown, OH, appeared to have the largest increase in the USA. Even the FBI's publicity handout pointed this out. The number was so high it cried out for the explanation. So we called the Youngstown police chief and learned that a temporary clerk had filled out the forms incorrectly. Now, what she had done is put every assault, major and minor, as a felony.

In this case, the computer data provided national stories, and analysis and double checking saved us from giving our readers the wrong information, and the embarrassment of being caught gave the FBI and the Youngstown police department a powerful incentive not to repeat that particular error.

Until recently, one of the most responsive government agencies has been the U.S. Bureau of the Census. Although its data—especially on magnetic tape—is sometimes technically difficult to handle, the Census Bureau had been one of the most helpful government staffs. Depending on the topic, you could usually find a highly trained census staff member ready and willing to help.

Recently this has changed, as politics and protocol have become more important than disseminating information. Under a new policy, my staff can no longer call the expert to find out a quick answer. All national media must go through a public relations person who seldom knows the answers and wastes valuable time. This is a policy that needs to be changed.

At Census, and most Government agencies, public information officers have little or no training in computer information. This also needs to change. Just as the journalists are learning about new information technology, so must the intermediaries between policymakers and journalists.

I know this is not a subject of this committee, but I would be remiss if I did not mention at the heart of the use of the Federal data are the guaranties of the Freedom of Information Act. The act was passed in 1966, before the computer era. The Federal Government pays to collect enormous amounts of data, and it must be available in a usable form. The American Society of Newspaper Editors and journalists everywhere strongly support Senate bill 1940, the Electronic Freedom of Information Improvement Act.

In the end, the more people who can obtain and analyze data, the better served this country will be. John Milton, the first greet theorist on freedom of the press, had it right. Truth flourishes in a free marketplace of information.

Thank you.

Mr. WISE. Thank you very much, Ms. Wallace.

[The prepared statement of Ms. Wallace follows:]

Statement of Julia Wallace
Special Projects Editor, USA TODAY
Before The House Subcommittee on
Government Information, Justice and Agriculture
June 4, 1992

Good morning, Mr. Chairman, members of the Subcommittee. My name is Julia Wallace and I am the Managing Editor for Special Projects at USA TODAY. I am here to testify about USA TODAY's use of U.S. government computerized data.

Our special projects department has been in operation for approximately four years. It is the largest data-analyzing operation in U.S. journalism. We have learned, often the hard way, about the myths and the realities of computer-assisted journalism.

In an era when citizens feel overwhelmed by complex issues from the S&L bailout to race relations, from the federal deficit to nuclear waste, the public needs analysis and context to bring these gargantuan subjects into understandable focus.

This is not the journalism of unnamed sources or leaks. It is clear, on the record, and the sources and the methods of analysis are documented.

The brute force of the computer makes it possible to perform an astounding number of rankings and matches that would be totally impractical for anyone searching paper records. Newspapers have used computerized public records, for example, to name a state's 10 drunkest drivers (on the basis of their blood alcohol content) or to identify drunken driving offenders who also drive school buses. But the most useful applications combine that power with analytical skill. Merely printing data is like printing the phone book. It's analysis that makes it news.

Just last week, using computer data filed with the Federal Deposit Insurance Corporation, USA TODAY analyzed the financial health of each federally insured bank in the country and printed a state-by-state list of troubled banks. It showed that problems in many states are leveling off. It also showed that Citibank -- the nation's largest -- is among the most troubled banks in the country. Our operating definition of "troubled" used a formula comparing assets at risk with the reserves behind them. It has been highly predictive of bank failures.

The administration, of course, keeps its own lists of banks to watch for potential trouble. It does not make these lists public. We provide a service that readers would not otherwise receive.

In our four years as a department, this is just one of many stories we have reported through analysis of government records. Among others:

* We learned that the most dangerous stretches of interstate highway are not in the crowded urban centers of the East, but on the lonely segments in the West, far from law enforcement centers or emergency medical help. A stretch of I-84 in Cassia County, Idaho had the most deaths per vehicle mile in 1988-1989.

* Through another analysis, we found the USA's most ethnically- diverse metropolitan area had moved. In 1980, it was Miami. In 1990, it was Los Angeles. (The method we developed for measuring ethnic diversity has been reported in a scientific journal, "The International Journal of Public Opinion Research.")

* Working with 1990 Census figures, we found that the federal agency most successful at reducing housing segregation in the private sector has been the Department of Defense. Our analysis found that metropolitan areas with nearby military installations are the least segregated -- because of the military's regulation of the off-base housing in which its personnel may live.

It sounds so easy to say that we obtained data -- in the form of magnetic tapes or compact discs or via computer modem -- from this or that agency and mixed it with our own information and

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analysis to produce a report. But it is never that easy. Federal agencies, sometimes by inertia, sometimes by design, have placed formidable barriers in the way.

First, there is the problem of discovering what data are available. There is no central government catalogue of federal databases. There are some commercial catalogues for sale. But they are inadequate and quickly outdated. This is much like having a very expensive public library without a card catalogue. Fair access requires a better system of discovering what is available.

Then there is the nitty-gritty of getting the right computer tape and understanding its format and layout. It's often not easy to find the person or department responsible for gathering and distributing the database. Then we must find someone within the agency familiar enough with it to help us interpret the data. No database ever speaks for itself. Its meaning is never self-evident. A computer tape handed to us without a clear layout and explanation might as well have TOP SECRET stamped on it.

For example, we requested a database from the Nuclear Regulatory Commission and we were told the agency did not possess such a file. But one of our reporters learned the NRC had issued a contract to purchase the very data we had requested. So we knew it existed. Finally, it came to light that the person who understood that database had left the NRC and no one else available there knew how to deal with it.

Sometime the barriers are not so innocent. The response we get is plain obstructionist.

The Resolution Trust Corporation had lists and descriptions of all the property it was selling as a result of the S&L bailout. We asked for those lists and descriptions in computer form so we could do analysis. We were told it was not available electronically. We knew this was false. On paper the lists filled about six telephone-book size volumes. It had been printed on a dot matrix printer, so we knew it was on computer somewhere. We decided to see what it would cost to have that paper copy input. The bid was $15,000. It would have cost the federal goverment less than $100 to copy the computer tape -- a fee we would have paid.

This brings us to the matter of cost. Electronic data should be available at a reasonable price. Honest incremental costs of reproducing data and their supporting documentation should be covered. But government sales of databases need not become a profit center.

Now a less obvious problem. Once a reporter learns of the existence of computer data and we obtain the tape, there is always a lot of "cleaning up" of the numbers. The tapes are, to use computer parlance, usually "dirty."

Some agencies provide very clean tapes -- for example, the FDIC tapes on banks and savings and loans are very accurate. However, others are riddled with errors -- mistakes made by the people filing the reports or made by the government agency.

For example The EPA Toxic Release Inventory of 1987, was contained in a computer tape released in March 1989. Our series ran in August, 1989. By December of that year, the EPA had made some 20,000 corrections in the data. And we only found out about those corrections from a report given at an EPA-sponsored seminar many months later. The errors came from processing, from inputting or from the factory supervisors who filled in the numbers in the first place.

And here we have a key problem -- errors. The data must be accurate. All of it must be accurate -- not just the parts for an agency's internal use. In data analysis there is no such thing as "Close Enough For Government Work." It's either right or wrong. That's how computers work.

Government record keepers need good training and clear explanations of what needs to be filed. And they need to have good cross-checks to find errors.

One way to eliminate many errors in databases is double entry. Have two people enter the numbers and let the computer check for cases where they fail to match. We use this system when we create our own databases. It is a false savings to try to input data quickly without adequate backup checking. In the end it will cost more and give policy makers and the public bad information until the errors are caught.

Let me be very clear about this: I am not proposing any law or regulation to require federal agencies to meet some arbitrary standard of accuracy before releasing computer-readable data. The mere knowledge that data are accessible to the public is a powerful incentive to the originating agency to get it right. And responsible news organizations will always need to go behind the computer-generated information to look at the fallible humans behind it. We believe strongly that the demands of the public in the information marketplace will consistently and relentlessly push all of us -- journalists and government data collectors alike -- to improve accuracy. Here is a case that illustrates the point.

In 1989, we were looking at FBI Uniform Crime Data from large cities. We began to do a crime-by-crime analysis. And when we looked at felony assaults, Youngstown, Ohio, appeared to have the largest increase in the USA. Even the FBI's publicity handout pointed this out.

The number was so high that it cried out for explanation, so we called the Youngstown Police Chief and learned that a temporary clerk who filled out the forms had included every assault -- major or minor -- as a felony. The FBI later confirmed the chief's story.

In this case, the computer data provided national stories, and analysis and doublechecking saved us from giving our readers the wrong information. And the embarrassment of being caught gave the

FBI and the Youngstown Police Department a powerful incentive not to repeat that particular error.

Until recently, one of the most responsive government agencies has been the U.S. Bureau of the Census. Although its data -- especially on magnetic tape -- is sometimes technically difficult to handle, the Census Bureau had been one of the most helpful government staffs. Depending on the topic, you could usually find a highly trained Census staff member ready and willing to help. Recently that has changed, as politics and protocol have become more important than disseminating information. Under a new policy, my staff can no longer call the expert to find out a quick answer. All national media must go through a public relations person who seldom knows the answers and wastes valuable time. This is a policy that needs to be changed.

At Census and most government agencies, public information officers have little or no training in computer information. This also needs to change. Just as journalists are learning about new information technology, so must the intermediaries between policy-makers and journalists. They need to understand the data on which policy is based and how others could analyze it.

I know this is not the subject of this hearing, but I would remiss if I did not mention that at the heart of the use of federal data are the guarantees of the Freedom of Information Act. That act was passed in 1966 before the computer era. The federal government pays to collect enormous amounts of data and it must be available in a usable form. The American Society of Newspaper Editors and journalists everywhere strongly favor S.1940, The Electronic Freedom of Information Improvement Act.

In the end, the more people who can obtain and analyze data, the better served this country will be. John Milton, the first great theorist on Freedom of the Press, had it right. Truth flourishes in a free marketplace of information.

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Mr. **Wise**. Next, will be Dr. Alan Westin, chairman of the Reference Point Foundation from New Jersey.

Dr. Westin.

STATEMENT OF ALAN WESTIN, CHAIRMAN, REFERENCE POINT FOUNDATION, TEANECK, NJ

Mr. **Westin**. Thank you very much, Congressman.

We have prepared a presentation that will go back and forth. I will start and tell a little bit about the Consumer Protection Network, its origins and its purposes. Then my colleague and codirector, Linda Golodner, will describe the problem it addresses: Telecommunications frauds and scams, and, in particular, the links it will create with Federal information providers, out to State and local governments, and to consumers and to consumer protection groups, and then information flows that we hope will go back to the Federal Government. And then I will return to say a little bit about our public information dissemination facet of this project.

Let me tell you a little bit, if I may, about how this project got started and how I came to it. For the last 30 years, I have been both studying and advocating the study of the ways in which information technology affects people and organizations and society. As you know, from my having testified previously to your committee on issues of personal privacy, I have a central concern that we not use information technology in ways that erode the fundamental protections of individual and associational privacy that our constitutional and political systems are fundamentally aligned with.

On the other hand, the other side of the coin is the access of the public to information—especially to information that is collected with taxpayer money in order to carry out Federal functions. This is information to which citizens have rights of access under freedom of information laws in order to know how the Federal Government is carrying out its duties, and to be able to conduct media and citizen and interest group oversight of the ways in which the Federal Government conducts itself.

In 1989, I was one of the witnesses who testified at your hearings on what I saw as the danger that although the governmental and business communities were being well-served by the computerization of Federal public information, the voluntary sector and the active citizenry were in great danger of being informationally disenfranchised because of the high cost of access to computerized public information, because of the technical skills that were still required in order to use the information the Federal Government could provide, and because of what was then a heavy concentration on the commercial sector taking Federal public information and putting it out in high cost and high-tech formats that were not accessible to the general run of public interest and voluntary sector associations.

I was concerned and expressed that to the committee, but I recognized that with that kind of criticism went a fundamental responsibility that if the voluntary sector did not itself organize, get its act in order, use its funds to create technological capabilities, train its people to understand and use computerized information, then, fundamentally, it would never be listened to in the larger public policy debate, and, rightly, it would be criticized for wanting the Federal Government to do for it what, as an independent voluntary sector, it really ought to be doing for itself.

And that explains the other hat that I wear today: That of the president of a private foundation, Reference Point, whose goal is to help the voluntary sector and active citizens to locate, use, and exchange information from whatever source, that is, public information.

And compared to the 1989 testimony that I gave, today I am able to tell you about an effort presently unfolding, which I think demonstrates the heart of what we call the "Reference Point idea" and the role of Reference Point as a catalyst. We believe that we need to create a large scale public information network, or a public information exchange, throughout the 1990's.

It is going to be a very large scale effort, because, essentially, it responds to the kind of comments you have heard from the previous two witnesses: The need essentially to understand that directories are the key to the way in which we need to identify and locate Federal public information and, in fact, all computerized information.

At the moment, there is so much out there that people are drowning in trying to navigate this raging sea of information. They don't know where to locate what it is that they need. And so our concept at Reference Point is to create field by field, until you build up a large, overall mass, bodies of public information that will emerge as each field recognizes the value of the organizations in that field. Voluntary sector, local and State government, Federal agencies, and professional and academic groups will describe themselves and their resources, put in abstracts and then full texts of the important public information they have for their constituents and those interested in that area, and make that information available in a variety of formats for delivery, and also in a variety of costs based on the ability of people to pay.

That is the idea that we brought to the Consumer Protection Network, which I am describing for you today. We became interested in the fact that telemarketing frauds and scams was an area that almost perfectly demonstrated the problems of information and exchange coordination and access in our increasingly high-tech society.

Several things were taking place: One, the fraud and scam artists had learned how to use computerized lists, to use automated dialing systems, to move quickly into frauds and scams using the telephone and the mails connected to the telephone. By rapid extraction of money from those that they would defraud, they could strike—using these technological capabilities—and change their name, change their location, and move from State to State, and make it extremely difficult for law enforcement to effectively control them.

Our sense was that this was a perfect example of where we ought to be applying information technology and the organization of information resources to protect legitimate businesses and legitimate government activities and to be able to help what was a—is a—disorganized, and all too often fragmented, effort at information sharing and information exchange; to be at least as capable as the fraud and scam artists that are making use of the technology and, hopefully, get ahead of them.

So we approached Citicorp, which had a strong interest in this area, because with Visa and Master-Card, major banks are victims of the kinds of fraud and scam that is of major proportion today. And we asked them if they would be willing to be the founding sponsor of the Consumer Protection Network, and to see to it also that basic organizations with a central interest, like Master Card and Visa, and major communication companies, the long-distance carriers for whom the 800 and 900 numbers are major sources of their activity, would be willing to support this. And we have MCI as the first of what will be several of these kinds of telecommunication companies involved.

We suggested that the model for Reference Point was that we should find as a partner an organization that had the substantive knowledge about telecommunication frauds and phone frauds. That was the National Consumers League, which not only has itself a long record of being active and a guardian for consumer interests in this area, but had organized the alliance against fraud in telemarketing, uniting 90 organizations of various kinds—business, law enforcement, consumer protection, the media and so forth—into an exchange effort to educate consumers and to exchange information.

But at the time we approached the National Consumers League, it was what could easily be called a low-tech operation. It did publication of pamphlets and materials, it got all the people together, but it did not have advanced information technology resources either at the helpline or hotline capability or the online data base capacity.

A final aspect that goes to the creation of the Consumer Protection Network was the fortuitous report of the House subcommittee at the end of 1991 that pointed out how difficult it was for telecommunication fraud and scams to be effectively met when Federal agencies were not exchanging information among themselves or between Federal and State law enforcement agencies in the way that getting their arms around the problem required.

With that as background, let me ask Linda if she will describe a bit more about the dilemmas and problems of telecommunication frauds and scams, and how we see working with Federal, State, local agencies, and other players, in order to put together several facets of the law enforcement prosecution side, and then I will come back and describe how large-scale public dissemination of information can serve consumers, legitimate business, government consumer protection agencies, the media and so on.

[The prepared statement of Mr. Westin follows:]

Prepared Statement of Dr. Alan F. Westin, Professor of Public Law and Government, Columbia University, President, Reference Point Foundation, and Co-Director, Consumer Protection Network

Before the Subcommittee on Information, Justice and Agriculture of the House Committee on Government Operations Hearings on

"Creative Ways of Using and Disseminating Federal Information"

Washington, D.C., June 4, 1992

INTRODUCTION

Chairman Wise and Members of the Subcommittee, I am pleased to appear before you to discuss the ways that federal agencies in the computer age can both disseminate their public information more effectively and also improve their access to important public information produced by the voluntary sector and other private information sources.

I am appearing today in two capacities. As a professor of political science at Columbia University, I have devoted more than 30 years of study and policy advocacy to the impacts of computer and telecommunications applications on individuals, organizations, and society. And, as president of Reference Point Foundation, a non-profit organization founded in 1987, I have five years of experience in trying to help improve the uses of advanced information technologies to help the public locate and access vital public information.

One of Reference Point's major projects -- the Consumer Protection Network -- which we are developing in partnership with the National Consumers League -- is what you have invited me, and Linda Golodner, the League's President -- to describe and discuss with you today. We are delighted to do so, since the Consumer Protection Network offers a promising model of how advanced information technology can be organized by the non-profit sector, supported financially by the business community, and be a major vehicle for federal agencies (as well as state and local) to use both to contribute and obtain valuable information.

First, let me try to put our project, and these hearings, into basic perspective.

IMPORTANCE OF THE SUBCOMMITTEE'S HEARINGS

We firmly believe that seeking innovative ways of using and disseminating federal information is central to the preservation and extension of our democracy. As I testified before this Subcommittee in 1989, governmental policies in a high-tech age pertaining to the collection, combination, analysis, and dissemination of federal information will shape (1) the way government agencies perform their assigned functions; (2) the way government information processes contribute to the common storehouse of knowledge about our lives and affairs; and (3) the way government information policies do or do not assist voluntary groups and individual citizens to learn about and participate in public policymaking and the conduct of public affairs.

I expressed concern then that the computerization of federal public information, which was progressing without articulated policies to ensure public access, could result in the informational disenfranchising of both large segments of the voluntary sector, on which our society increasingly depends, and individual citizens.

THE NEGATIVE IMPACT OF UNPLANNED COMPUTERIZATION

I described the results of a 1989 poll Reference Point conducted among 88 national voluntary associations. A majority of the organizations reported that they felt they had been better off in locating and obtaining federal information before 1980 than they were in 1989. The high cost of accessing federal government databases through commercial online services was of broad concern. But apart from the need for low-cost usage, organizations cited four other necessities: (1) a user-friendly, multi-agency, multi-topical directory of available information; (2) better formats and search software for locating information in large files; (3) more timely, up-to-date information; and (4) effective training and guidance in using online data, provided either by governmental or private sources. It is useful to note that many of Reference Point's findings paralleled those of a 1988 General Accounting Office (GAO) survey of national associations. (Federal Information: Users' Current and Future Technology Needs, GAO/GGD-89-20FS, November, 1988). In particular, that survey also pointed to a "comprehensive index of federal information" as an item association members felt would be most useful to their work.

In the absence of these capabilities, organizations expressed the common theme that they are losing rather than gaining ground in their ability to know what information relevant to their work the federal government now has, what the content and format of such information is, and how to get to it efficiently at bearable costs. The toll they felt this lost ground was taking on their effectiveness in serving their clients and/or fulfilling their roles as watchdogs over governmental activities was considerable.

I concluded that if this serious problem was to be overcome, action was needed by three separate entities: (1) Congress, in its appropriation and authorization processes, would have to mandate that agencies provide for public access in designing or expanding computer systems; furthermore, Congress should provide funds for agencies to do public outreach in innovative ways; (2) The White House and OMB would have to define requirements for public access in supervising the computerization programs of federal agencies; and (3) the public interest groups and others in the voluntary sector--a powerful force in the balance of power in our democracy--would have to organize to make certain that the process of computerization emphasized public access. I stressed the need for a catalytic force to begin that process.

REASONS FOR OPTIMISM

I speak to you today with optimism that we are moving in the right direction. These hearings are evidence of continuing Congressional attention to the process of computerization of federal information. Furthermore, Reference Point reported, in an exploratory paper commissioned by the Office of Technology Assessment (OTA), that there are now significant innovations taking place in the nonprofit sector's use of technologies as services. We recommended that two innovations--the widespread use of bulletin board systems and the expansion of cooperative networks--were trends that the federal government might emulate to improve public services. ("Nonprofit Sector Innovations in Electronic Service Delivery," December, 1991.)

Reference Point is itself engaged in the development of an innovative and potentially far-reaching program that will incorporate federal information in ways that have never been done before. I shall describe that program in detail today.

REFERENCE POINT AS CATALYST

Reference Point, which received its 501(c)(3) status as a tax-exempt foundation from the Internal Revenue Service in 1989, was formed to help ensure that computer and information technologies advance our nation's democratic traditions and strengthen the vital work of America's voluntary sector. To fulfill that mission, the organization engages in research, education, advocacy, and the development of low-cost information systems for public use.

Reference Point is guided by a board of directors and advisory committee whose members are experts in computer technology, law, information science, and a cross-section of voluntary sector activity. A descriptive brochure and a copy of Reference Point's newsletter, *The Catalyst*, have been submitted to the Subcommittee for the record.

Reference Point seeks to act as a catalyst, uniting the talents and resources of business, government, and the voluntary sector in pursuit of common goals. Through the Public Information Exchange (PIE), an interactive and cooperative online information system operated in the public interest that is now nearing implementation, Reference Point plans to begin the creation of a central clearinghouse of the wealth of public interest information generated by business, government, and the voluntary sector. A unified interactive directory will facilitate the collection, sharing, and exchanging of both electronic information and hard copy. This information will be made available at low, non-commercial rates.

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An essential component of the PIE is the information of federal, state, and local government agencies, and Reference Point plans to acquire, catalog, format, and disseminate this information to facilitate its more widespread use.

The Reference Point model is to organize the information from many disparate sources by subject matter--by forming collaborations with the recognized experts in a particular field and assembling expert advisory committees to develop and guide the projects.

A NEW NATIONAL PROGRAM: THE CONSUMER PROTECTION NETWORK

An example of this model is the current partnership between Reference Point and the National Consumers League to form a nationwide Consumer Protection Network (CPN) to combat telemarketing fraud. The National Consumers League is the recognized leader in consumer protection against phone fraud. As coordinator of the Alliance Against Fraud in Telemarketing, it heads a coalition consisting of public interest groups, businesses, organized labor, consumer news reporters, consumer protection agencies, trade associations, and law enforcement agencies.

Telemarketing fraud is a growing national problem that has become even more widespread as scam artists master new technologies--such as 900 phone numbers, computerization, and electronic fund transfers--and apply them for their illegal purposes. This explosion of fraud undermines legitimate businesses and threatens ethical consumer marketing. It raises the specter that valuable uses of technologies will be jeopardized in the efforts to curtail their misuse.

The Consumer Protection Network is designed to "recapture" computer and communications technologies and apply them instead to the prevention and prosecution of phone fraud. Having as an integral goal the improved dissemination of important federal information for this purpose, the CPN is, I believe, an example of the kind of creative approaches this Subcommittee seeks to explore.

THE DIMENSIONS OF PHONE FRAUD

Linda Golodner, president of the National Consumers League, will provide you with a more detailed description of the problem of phone fraud.

Briefly, I will tell you that the fraud reported by consumers and businesses amounts to more than $15 billion a year, and that untold billions go unreported. A report by the House Committee on Government Operations, "The Scourge of Telemarketing Fraud: What Can Be Done About It?", pointed out that "The reluctance of many individuals to come forward, together with the lack of a comprehensive and well-known central database of complaints, means that no one knows the extent of and losses derived from telemarketing fraud." (December 18, 1991.)

The victims are found among all demographic groups, but the elderly, poor, foreign-speaking, economically distressed, and youth are particular targets.

The House Operations Committee Report cited above stressed the need for a comprehensive central clearinghouse database of complaints against telemarketers or ongoing law enforcement investigations, accompanied by extensive publicity to make consumers aware of it, so that consumer complaints would no longer be dispersed to many state and federal agencies. This database would facilitate information sharing among federal and state agencies, thereby improving coordination of investigations and prosecutions and avoiding unnecessary use of scarce resources.

The Report further recommended that the Securities Exchange Commission, the Commodities Futures Trading Commission, and the FBI should all fully participate in the existing FTC/NAAG database (with the assurance that they could provide such information without violation of Rule 6(e) of the Federal Rules of Criminal Procedure).

Because scam operators avoid detection by regularly moving from one state to another and changing the names of their companies, it is difficult to pursue them. The Report pointed out the inadequacies of attempting to respond to high-tech operations with low tech capabilities and scarce resources.

CREATION OF THE CPN

The Consumer Protection Network now in development responds to the concerns expressed in the House Operations Committee Report.

Using the organizational model I noted earlier, Reference Point conceived the idea for the CPN. (A booklet describing the CPN has been submitted to the Subcommittee for the record.) The project has five objectives:

• **Consumer Protection**, featuring a national toll-free consumer helpline to heighten public awareness and ease in making complaints;

• **Fraud Prevention and Prosecution**, using advanced information technology to facilitate investigations and prosecutions;

• **Confidentiality and Security of Consumer Information**, through carefully articulated policies and programs;

• **Public Education**, through both traditional and new electronic media; and

• **Research**, involving investigations of the facts of telemarketing fraud. (The CPN has already commissioned a survey by Louis Harris and Associates to determine the extent of the problem, and the data will soon be released.)

We recognized that the large-scale effort we had in mind would require both substantial financial backing and the commitment of organizations that have a vested interest in seeking a solution to this problem. I approached Citicorp, one of the nation's leading financial institutions, with the details of our plan. In December, 1991, Citicorp enthusiastically agreed to be the CPN's initial founding sponsor.

The choice of a nonprofit organization to serve as our expert partner in the CPN was clear: the National Consumers League, with its leadership in the Alliance Against Fraud in Telemarketing, provided the in-depth expertise and understanding of the issues that we needed. NCL readily accepted my invitation to collaborate on the design and implementation of the CPN.

RESPONSE TO THE CPN

The reaction to the CPN has been uniformly positive. Shortly after Citicorp joined the project, MasterCard International, MCI Communications Corporation, and VISA signed on as founding corporate sponsors. Discussions are under way with other leading financial institutions, telecommunications firms, and information service companies, who have all expressed great interest in the project.

The media response has also been strong and positive. When we introduced the CPN at a press conference held at the National Press Club in Washington on January 22, 1992, the project received front page coverage in the Wall Street Journal, extensive stories in the Washington Post and the AP wire services, and segments on Good Morning America and CNN. More than 400 television stations picked up the video news release, and scores of favorable editorials have appeared in newspapers throughout the country.

As I previously mentioned, Linda Golodner, president of the National Consumers League, will provide you with a more detailed picture of the dimensions of the phone fraud/scam problem the CPN was designed to combat. She will also describe the gratifying response we have received from federal agencies to date; the cooperation with the FTC/NAAG database that is already under way; and the federal information that the CPN will need to carry out its work. Furthermore, she will describe the initial test of the CPN helpline and the closed information system designed to aid law enforcement and regulatory agencies.

I now turn to the public content of CPN Online.

PUBLIC ONLINE SERVICES

While privacy and confidentiality will be essential to certain components of the CPN, there will also be a strong public education component. It will be fulfilled through a multi-media effort for consumer assistance and education relating to telemarketing fraud that combines both traditional and electronic methods of information dissemination.

The public online service will feature the following elements:

- **Interactive directories** to help consumers locate organizations, services, and programs to assist them, as well as relevant pamphlets, periodicals, and other publications. For example, the service will direct consumers to all the relevant county, state, and federal agencies--from local consumer protection offices to state attorneys general offices to U.S. Postal Authorities--as well as Better Business Bureaus, nonprofit consumer organizations, corporate consumer affairs offices, and media "call for action" programs.

- **Public education resources** will include a telefraud database originating with data from the National Consumers League and other materials; government and industry alerts, notices, and warnings, including advisories issued by authorities; and popular examples of notable scams and frauds the public should avoid (a *modus operandi* file).

- **Public records** will be databases of such publicly available information as public filings (suits and settlements), indictments, judgments, and administrative actions (such as disciplinary action and cease and desist orders).

- **Guides and aids to special subjects or audiences** will provide special subject assistance for special needs or interests, such as senior citizens or Spanish-speaking people.

The public online services will also include **online libraries,** carrying full text and summaries of publications, pamphlets, periodicals, and newsletters, as well as open and moderated online conferences. **Fulfillment** services will accept orders for documents placed online and fill them via fax and mail, with distribution conducted through a network of sheltered workshops employing disabled people throughout the nation.

In addition, the public online services will be used to survey subscribers and users on relevant topics and to make referrals and transmit communications (messaging and electronic mail to cooperating agencies, businesses, and organizations).

ENSURING PUBLIC ACCESS

The CPN's Public Online Services will be available to individuals with computers in homes and offices through arrangements with information service firms, such as Prodigy and CompuServe.

In addition, the public will have access to its contents through online connections to public libraries and other public locations, such as senior citizens centers, neighborhood centers, and shopping malls.

FEDERAL AGENCIES AS INFORMATION PROVIDERS

Vast amounts of federal public information would be valuable for dissemination through the CPN. Included are pamphlets, periodicals, and other publications, as well as relevant databases. To name just a few:

"A Consumer's Guide to Postal Crime Prevention" from the US Postal Inspection Service; "Contest Cons," from the Federal Trade Commission; "Consumer Alert: Job Ads, Job Scams, and 900 Numbers," from the Federal Trade Commission; and "A Spotter's Guide to Commodity Fraud," from the Commodity Futures Trading Commission.

In our discussions with state and county consumer protection agencies and bank and credit card company representatives, we have found significant support for the concept of a database of existing federal laws and regulations, augmented by state and local laws and regulations.

And, as previously noted, the public records of adjudicated cases will be important components of the CPN. As consumer education and prevention are prime motivators of the CPN, we look forward to a public with heightened consciousness of the issue that will make use of this newly available information.

FEDERAL AGENCIES AS INFORMATION USERS

We know that informal networking goes on today in telemarketing fraud investigations, but it is haphazard and inadequate. As the House Operations Committee Report observed, there is a great need for increased cooperation among the various federal agencies. The same is true among federal agencies and the state and local agencies that are often in the front lines of combat.

Furthermore, our conversations with banks and credit card companies have yielded significant interest in information-sharing with federal agencies. Such efforts will be undertaken in ways that will be consistent not only with current laws and regulations governing privacy, confidentiality, and liability, but also with CPN policies established by our Experts Advisory Committee, whose members will be drawn from all the sectors involved.

ADDITIONAL INFORMATION SUPPLIERS AND USERS

We foresee information being both contributed to the CPN and extracted from it not only by federal and state agencies, but also among state and local agencies--both law enforcement and consumer protection. Relevant businesses and trade association are other anticipated system contributors and users. Furthermore, nonprofit consumer and public interest organizations can also be expected to use--and contribute to--the CPN.

A SELF-SUSTAINING SYSTEM

Our goal is to create a system that will be self-sustaining within five years. Though use will be provided at nonprofit rates and will be free through public libraries and other public access sites, we anticipate the volume of paid use will generate sufficient revenues to underwrite operations.

SUMMING UP

These hearings are intended to underscore the importance of federal information to the public and to identify innovative ways federal information can be disseminated. As I noted in the beginning of my testimony--and when I previously appeared here in 1989--I believe the policies and practices the federal government adopts in disseminating information in the Computer Age are crucial to our democratic process. Not merely preserving public access--but expanding it--is a goal that demands widespread attention and support.

The Consumer Protection Network holds great promise for aiding the dissemination of federal information important not only to prosecuting fraud cases that have already occurred, but also preventing its occurrence through improved public education and greater vigilance on the part of the authorities.

At a time when consumer protection agency budgets have been reduced, the CPN can minimize redundant investigations that waste scarce resources and provide overworked investigators and other staff with new tools to do their jobs more efficiently.

The CPN is a partnership among business, government, and the nonprofit sector. Its success will depend upon the degree to which all parties are willing to overcome their proprietary interests in pursuit of the common good.

This Subcommittee, and Congress as a whole, can aid the CPN's success by supporting the House Operations Committee Report's call for greater information sharing among the various federal agencies. More broadly, it is essential that Congress ensure that the information will indeed be available. This crucial effort will require updating federal laws and regulations to guarantee public access to information in electronic form, and mandating that federal agencies be responsive to public requests for the information that belongs, rightfully, to the public.

We expect the CPN to succeed. Moreover, we believe it can serve as a model for the creative ways that applications of advanced information technology can improve the dissemination of federal information--augmented by information from other sources. The CPN's focus is on telemarketing fraud, but the model is applicable to any subject area of public concern.

Consumer Protection Network

A Project of the
National Consumers League
and the
Reference Point Foundation

Initiated January 1992

What is the Consumer Protection Network (CPN)?

A joint project of the National Consumers League and the Reference Point Foundation to combat telemarketing fraud.
The project's goals are:

- to educate and protect American consumers and businesses by applying advanced information technology
- to create the nation's first national consumer complaint hotline concerning telemarketing fraud
- to establish a central clearinghouse concerning telemarketing fraud and an online information service to support it
- to provide research on concerning telemarketing fraud and on-going trend analysis

Panel 1

What is the problem?

- Phone fraud rips off consumers and businesses by billions of dollars per year — $15 billion *reported* losses, untold billions go unreported
- New technologies — 900 numbers, computerization, electronic fund transfer — provide new vehicles and growth in fraud
- Fraud explosion undermines legitimate business and threatens ethical consumer marketing
- Valuable uses of new technologies are jeopardized
- Existing consumer protection/law enforcement efforts are not keeping pace — lack of resources, low tech, need for better coordination

Panel 2

What is needed?

- **A cooperative, coordinated response involving all concerned**
  - Voluntary Sector & Business & Government
- **Technology that is equal to the challenge**
  - Using the advances and powers of the new technologies to protect consumers
- **Computer and telecommunications systems to *collect and organize* the information from multiple sources**
- **Computer and telecommunications systems to *alert and mobilize* consumers, business and protection agencies (government and nonprofit) to fraud and scams :**
  - Links to law enforcement
  - Links to media
  - Links to public information

Public Announcement of CPN

- **CPN was publicly unveiled at National Press Club (Washington, DC) on January 22, 1992**

- **Media response was strong and positive**
  - 416 television stations picked up the video news release
  - national network coverage appeared on *Good Morning America* and CNN
  - nation-wide newspaper coverage, included features in *Washington Post*, *Wall Street Journal*, AP and other wire services
  - many favorable editorials have appeared

- **Prominent associations and agencies have pledged support**
  - Federal Trade Commission
  - Council of Better Business Bureaus
  - National Association of Attorney Generals
  - National Association of Consumer Agency Administrators

National Consumers League (NCL)

- **A 501(c)(3) nonprofit membership organization**
  - Oldest consumer organization in United States, founded in 1899
  - Headquarters in Washington, DC
  - Membership and state affiliates throughout the world
  - Board of Directors from corporate, public, organized labor and private sectors

- **Mission Statement:**

  "Working to win and maintain health and safety protections and promote fairness at the marketplace and at the workplace"

- **President (and Operating Executive) —— Linda Golodner**

  Chair and Founder, Alliance Against Fraud in Telemarketing

  Board of Directors, Direct Selling Education Foundation

  Executive Committee, National Coalition on Consumer Education

National Consumers League —— Programs

- **Engages in worldwide research and public education through publications, conferences, training, public speaking, coalition building, media outreach and database development on wide range of consumer issues**
  - food and drug safety
  - health care
  - telecommunications
  - fair labor standards
  - financial services
  - phone fraud

- **Assists consumers in resolving complaints through information and referral services**

- **Conducts reform and advocacy efforts**
  - — maintains working relationships with several federal and state government agencies; submits comments representing consumers to regulatory agencies
  - — delivers testimony on federal and state laws and legislation
  - — provides leadership in consumer/business cooperative programs

Panel 6

Alliance Against Fraud in Telemarketing

- **Founded in 1988, the Alliance unifies government, business and other interests to promote cooperative educational efforts about phone fraud**
  - public interest groups
  - businesses
  - organized labor
  - consumer news reporters
  - consumer protection agencies
  - trade associations
  - law enforcement agencies
- **Coordinated by the National Consumers League: the recognized leader in consumer protection for phone fraud**
  - — recipient of American Telemarketing Association Board of Directors Award
  - — Distinguished Service Award in Consumer Affairs from the DC Society of Consumer Affairs Professionals in Business
- **Pursues an aggressive education program**
  - — continuing publications such as the *Consumer Protection Handbook*, the pamphlet "Swindlers Are Calling," a quarterly newsletter and others
  - — quarterly conferences and on-going membership education with featured subjects and speakers on such matters as "advance fee" loan schemes, Congressional affairs, direct debit fraud....

Panel 7

Reference Point Foundation

- **A 501(c)(3) nonprofit foundation**
  - established in 1987
  - headquarters in New Jersey with offices in the Washington, DC, area
- **Mission Statement:**

  "To ensure that computer and information technologies advance our nation's democratic traditions and strengthen the vital work of America's Voluntary Sector"
- **President — Alan Westin**

  Professor of Public Law and Government, Columbia University
- **Under leadership of a distinguished National Commission**
  - founded by Vartan Gregorian, President, Brown University
  - other members include: Louis Harris (Louis Harris & Associates); Nancy Neuman (former President, League of Women Voters); Judge Louis Pollak (US District Court)

Reference Point — Program

- **Working with a National Advisory Committee, representing a wide range of America's Voluntary Sector, such as:**
  - Cancer Care
  - League of Women Voters
  - American Library Association
  - Community Information Exchange
  - National Multiple Sclerosis Society
  - American Civil Liberties Union
  - Fund for the City of New York
  - American Enterprise Institute for Public Policy Research
  - American Association of Retired Persons
- **Conducting research, education and advocacy to advance uses of information technology by America's Voluntary sector**
  - — *Using the Public Library in the Computer Age*, published by the American Library Association
  - — survey and report for Office on Technology Assessment of the US Congress on the uses of information technology by the nonprofit sector
- **Creating online public information services for public use**
  - — in cooperation with the American Library Association and Public Library Association, helping local libraries to become key portals into online public information

The Five Objectives of the CPN

✓ **Consumer Protection**

.... featuring a national toll-free consumer helpline

✓ **Fraud Prevention and Prosecution**

.... using advanced information technology

✓ **Confidentiality and Security of Consumer Information**

.... through policy and programs

✓ **Public Education**

.... through new electronic and traditional media

✓ **Research**

.... investigating the facts of telemarketing fraud

Objective 1 — Consumer Protection

➤ Aims:

- provide an information service to assist and facilitate consumer reporting and notification relating to telemarketing fraud
- establish an information service for consumers to report fraud and receive assistance and referral

➤ Methods:

- establish a national helpline to enable consumers to report phone fraud and receive referral assistance and information about fraud
- develop an information service through a variety of public access channels

➤ Timetable:

- pilot "800" helpline is first priority; limited use by July, 1992; six-month test study
- research and program planning under way for related information services

Objective 2 — Fraud Prevention and Prosecution

➤ **Aims:**

— provide systems to assist law enforcement, consumer agencies, corporate security and consumer affairs professionals to prevent and prosecute telecommunications fraud and to help consumers with their complaints

— develop projects to provide subsidies and support for key potential users whose present resources prevent their using the CPN and existing networks

➤ **Methods:**

— bring together national experts on telemarketing fraud to define what is now working, what should be done, and what could help prevent and prosecute fraud

— determine what present systems exist that assist prevention and prosecution, and evaluate present and potential technological capacities

— offer consumer fraud complaint information and alerts to enforcement and regulatory agencies

➤ **Timetable:**

— summit meeting of experts to be held in June, 1992

— documentation of user requirements begun in March, 1992, & continuing

— contribution to FTC/NAAG database begun; *continuing subpoena authority being sought*

Objective 3 — Confidentiality & Security of Consumer Records

- **Aims:**
  - aid efforts to protect consumer personal records and information from improper and illegal use in telemarketing fraud
  - respect the privacy of consumers and assure confidentiality of all consumer complaints and in any other activity of the CPN

- **Methods:**
  - develop, maintain and monitor systems employed by CPN to ensure confidentiality and security

- **Timetable:**
  - documentation of user requirements begun in March, 1992, & continuing

Objective 4 — Public Education

➤ **Aims:**

- act as a multi-media clearinghouse for consumer assistance and education relating to telemarketing fraud, combining traditional and electronic methods of information dissemination
- establish a comprehensive plan to educate the public

➤ **Methods:**

- define public education campaign

➤ **Timetable:**

- pending evaluation of research efforts (see survey below)
- seeking recommendation from expert summit and Advisory Committees

Objective 5 — Research

- **Aims:**
  - serve as a national center for the ongoing study of telecommunications fraud and improved consumer protection and public education
  - research and develop special projects directed to assist targeted populations
  - encourage academics, experts, and journalists to do research and publish results

- **Methods:**
  - conduct a scientific nation-wide survey of consumers on telemarketing fraud
  - identify patterns of fraud and disseminate findings

- **Timetable:**
  - survey by Louis Harris & Associates has been commissioned; results will be available in early summer, 1992
  - requirements definition for systems to detect patterns of fraud and provide alerts began in March, 1992, and is on-going

Panel 15

CPN Will Provide Two Major Services

CPN Online —

an electronic information service with extensive databases and other features to serve organizations and consumers via computers and terminals

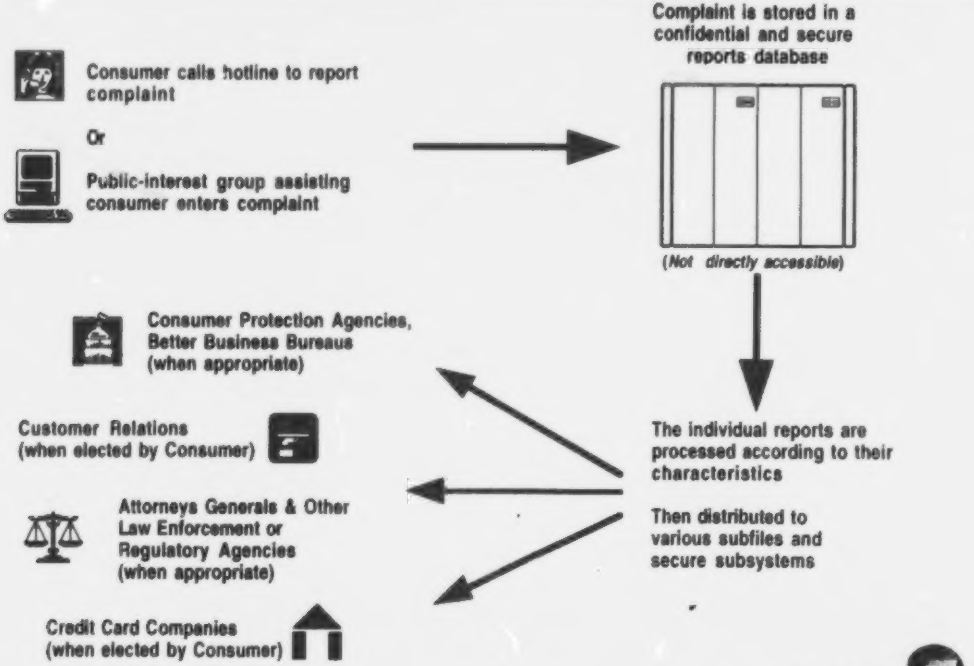
CPN Teleservices —

featuring toll-free phone fraud helpline for assistance to report complaints and to receive guidance and referrals

CPN Incident Reporting Process

- **CPN Teleservices will provide operator-assisted confidential incident reporting**
  - toll-free national hotline for telemarketing fraud complaints and referral
  - complaints forwarded to regulatory and law enforcement agencies via the Federal Trade Commission/National Association of Attorneys General Telemarketing Fraud database and other means
- **CPN Online will provide trends and pattern analysis of incidents**
  - integrated with incident reporting systems
  - make data and discoveries broadly available via FTC/NAAG database and other systems
  - utilize "expert" systems to identify trends and patterns and provide alerts to law enforcement
  - provide similar notice to trade associations and affected businesses and industries working with us to combat telephone fraud
  - establish a foundation for a national database on telephone-related frauds

How CPN's Alert and Response Systems Will Work



Consumer calls hotline to report complaint

Or

Public-interest group assisting consumer enters complaint

Complaint is stored in a confidential and secure reports database

(*Not directly accessible*)

The individual reports are processed according to their characteristics

Then distributed to various subfiles and secure subsystems

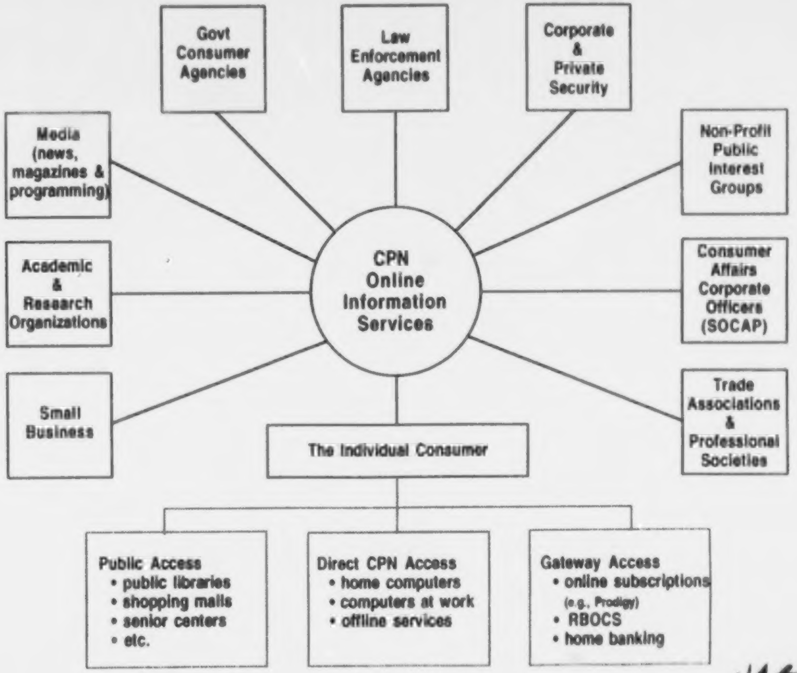
Consumer Protection Agencies, Better Business Bureaus (when appropriate)

Customer Relations (when elected by Consumer)

Attorneys Generals & Other Law Enforcement or Regulatory Agencies (when appropriate)

Credit Card Companies (when elected by Consumer)

CPN Phone Fraud Online Systems



CPN Online Information Services

Govt Consumer Agencies

Law Enforcement Agencies

Corporate & Private Security

Non-Profit Public Interest Groups

Consumer Affairs Corporate Officers (SOCAP)

Trade Associations & Professional Societies

Small Business

Academic & Research Organizations

Media (news, magazines & programming)

The Individual Consumer

Public Access
- public libraries
- shopping malls
- senior centers
- etc.

Direct CPN Access
- home computers
- computers at work
- offline services

Gateway Access
- online subscriptions (e.g., Prodigy)
- RBOCS
- home banking

Panel 19

CPN Online — the phone fraud resource guide

- **Interactive directories of consumer protection information (provided in cooperation with the source organizations)**
  - locator of organizations helping consumers
  - locator of services and programs helping consumers
  - locator of databases, publications, pamphlets and periodicals

- **Public education resources**
  - telefraud database (based on NCL data and other materials)
  - government and industry alerts, notices, and warnings, including advisories issued by authorities
  - popular examples of notable scams and frauds for general education (*modus operandi* file)

CPN Online — special databases on phone fraud

- **Public record databases — publicly available information only**
  - — public filings (suits and settlements)
  - — indictments
  - — judgments
  - — administrative actions (e.g., disciplinary action, cease & desist orders)
- **Guides and aids to special subjects or audiences**
  - — special subject assistance for special needs or interests

Panel 21

CPN Online — an electronic public library

- **Online libraries — general and topical**
  - full-text and summaries of publications, pamphlets, news, and periodicals
  - news and newsletters
  - online conferences (open and moderated discussions)
- **Fulfillment services**
  - fax broadcasting and retrieval
  - delivery of orders for hard copy of materials described on CPN phone fraud online
  - distribution through cooperating sheltered workshops
- **Other Services**
  - online surveys of subscribers and users (polling, activity sampling, etc.)
  - referral and communications (messaging and e-mail to cooperating agencies, businesses, and organizations)

Synergy of Services — how they will work together

CPN Teleservices

Takes calls to help consumers

Assists reporting

Takes orders for pamphlets and other educational materials

Provides recorded announcements and help

CPN Information Services

Organizes and distributes confidential complaints to law enforcement and others with authorized access

Collects and stores public information from all sources

Provides high-speed printing and fax as well as online copy

CPN Survey of Telemarketing Fraud

- **Better intelligence is needed to fight consumer fraud**
- **Initial survey — by Louis Harris & Associates for CPN — will answer critical questions and will provide first national inventory of telemarketing frauds**
    - What's going on ?
    - Which groups are being victimized ?
    - How much are consumers personally hurt ?
    - How can consumers be better informed ?
    - What can be done to help consumers fight back ?
- **Survey results will be combined with CPN incident-reporting data to give initial comprehensive picture — nationally, by region and locality, by specially-affected groups, and by *modus operandi* trends**
- **Continuing surveys will track changes on steady-state basis**

Summary — CPN's positioning and operations

- **A unified front against fraud**

  CPN is a not-for-profit project, uniting the voluntary sector, business and industry, law enforcement, and government and consumer agencies in attacking telemarketing fraud.

- **Directed by the National Consumers League**

  The National Consumers League is the established nonprofit leader in working on phone fraud among all public interest groups, business, industry associations, consumer agencies, and law enforcement.

- **...... And by the Reference Point Foundation**

  Reference Point has systems and technical resources to make CPN a leading-edge in the application of advanced information technologies.

- **Working with all who are interested in phone fraud issues**

  CPN's National Advisory Committee will represent all participating interests, in the typical pattern of nonprofit boards and councils, and will help shape basic CPN policies.

Panel 25

Reference Point

research • advocacy • information services
for information technology
in the public interest

The voluntary sector is widely recognized for the role it plays in assisting and serving the economic, political, social, and cultural needs of the nation. Our analysis shows a substantial and growing base of technical capacity. Where once we had been concerned about the incapacity of the voluntary sector, we are now impressed by its potential. ...We found that an understanding and knowledge of the creative uses of technology, combined with leadership and commitment to use them, are the vital ingredients.

— Reference Point report for the
Office of Technology Assessment, U.S. Congress, 1991

The Reference Point Foundation was founded in 1987 as a nonpartisan, nonprofit organization to help ensure that computer and information technologies are used to advance America's democratic traditions of equal opportunity and citizen participation, and to strengthen the vital work of the nation's voluntary sector.

Goals of Reference Point

To fulfill this mission, Reference Point promotes applications of telecommunication and information technologies through:

- research, education, and advocacy to advance public access to public information;
- assistance to the voluntary sector in their use of telecommunication and information technologies, especially for sharing public information;
- alliances with America's public libraries and others providing vital public access points where citizens and organizations may obtain electronic information; and
- creation of online public information services for public use, such as comprehensive national directories of public resources.

Technological Progress — and the Road Ahead

Reference Point was founded amid growing concerns that the computerization of information was occurring in ways that were seriously inhibiting the flow of information in the public interest. Business and government were rapidly eclipsing the voluntary sector in their access to and use of computerized information. Government information policies were not reflecting essential public access requirements. The high cost of commercial services was restricting access to those who were well-financed and technologically adept. And the rampant profusion of "uncontrolled information" had become, in the words of *Megatrends* author John Naisbitt, the "enemy" in an information society. These trends were perceived to be a dangerous threat to our democracy and a lost opportunity to apply technological advances to serve the needs of society.

In the years since Reference Point's creation, substantial grounds for optimism have developed. As Reference Point's recent report for the Congressional Office of Technological Assessment has found, important sectors of the nonprofit community are making innovative uses of technology. The commissioning of the OTA report is but one of a number of recent governmental efforts to improve the ways federal public information is delivered. And nonprofit databases, though still far fewer in number than commercial services, are steadily increasing.

Yet much remains to be done. The process of computerization in the voluntary sector must if nonprofits are to fulfill the growing responsibilities America is placing upon them. Greater cooperation among providers of public interest information from all sectors — business and government as well as nonprofit — must be fostered if we are to make most efficient use of our resources and successfully address our societal problems. Technology must be adapted and refined to overcome the system incompatibilities and differing classification schemes that inhibit use. And new technological approaches must bring the torrent of information under control so that information becomes our ally — not our enemy.

The Reference Point Vision

Reference Point has based its program and activities on achieving these ends. The organization seeks to act as a catalyst to unite the people, organizations, and resources necessary to apply computer and information technologies to more effectively serve the public interest.

One of the major barriers to public access to computerized information is the absence of any clearinghouse to organize the information in a way that it can be readily located and disseminated.

In the library community, OCLC (Online Computer Library Center) is a universal electronic source for bibliographic data. In the education community, ERIC (Educational Resources Information Center) provides a common computer resource for educational materials. However, there is no comparable public electronic service or clearinghouse for the wealth of public interest literature generated by the voluntary sector, government, and businesses. Without such a central clearinghouse, vast amounts of timely and important public information remain undiscovered, unread, and unused.

An Online Public Information Exchange

The Public Information Exchange (PIE), now nearing implementation, has been designed to fill this purpose. PIE will be an interactive and cooperative online information system, operated as a nonprofit entity in the public interest. It will be a public videotex service that acts as a common repository and public utility for any organization that wishes to participate — as information seeker, provider, or both. It will provide a means to locate and access information on the one hand, and to announce and distribute it on the other.

A unified interactive directory will facilitate the collection, sharing, and exchanging of both electronic information and hard copy. Citations to organizations, services, and information resources — such as publications, pamphlets, or videos — will be integrated by a common index and accessible through a single key word or phrase. Inquiries on any subject will result in a response that leads the information seeker to relevant organizations, services, and literature. In addition, when a participating organization or author provides the materials, a full text of literature will be available online or accessible by other means (such as mail order).

The PIE will evolve dynamically as information sources are placed in it by cooperating organizations.

Ultimately, the PIE will provide citizens and organizations with a single "reference point" from which a search for information may begin.

Public libraries, an important resource for the voluntary sector, government, and the public, will be major partners in these endeavors. PIE will provide public libraries with innovative ways to make better use of their existing resources, such as an index to publications that many public libraries now maintain in filing cabinets and have difficulty keeping up to date. More broadly PIE will be a ready resource for reference assistance to patrons.

In the near future, the PIE will be available through computer terminals in the public library and other public access sites, such as senior centers, municipal offices, etc.

Current Programs

Reference Point is currently applying this vision and these new electronic services to specific needs of the voluntary sector and the public.

Network for a Health Care Coalition

On behalf of the American Nurses' Association and the National Consumers League, Reference Point will provide videotex services to assist an experimental coalition-building project involving consumers and health care professionals. The coalitions are intended to increase public access to health care — one of the most vital issues facing America today. The project is underwritten by a grant from the W.K. Kellogg Foundation.

The project is designed to strengthen existing coalitions and to form coalitions where none now exist. It will train nurses, who have not traditionally been community activists, to take leadership positions at the local level and work with public interest groups to affect public policy for improved access to health care. Participants will receive training in both coalition-building and the use of computers.

The three-year project involves pilot areas in Central Florida, the metropolitan Milwaukee area, and the state of Virginia. These locales provide a sampling of urban and rural areas, a heavily military area, and the academic area around Charlottesville, Virginia.

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Reference Point's videotex service — with a periodic newsletter — will be the basic source for information-sharing and communication among the coalition members. A key feature of the service will be new databases developed to disseminate information about health care services.

The Senior Information Service

Reference Point has launched the first stage of a Senior Information Service (SIS), designed to improve delivery of services to America's senior citizens, our nation's fastest growing demographic group. The SIS is intended to lessen the fragmentation and duplication of efforts that currently waste scarce resources and hamper efforts to serve seniors.

> *... Reference Point would be a tremendous asset to our work. It is time consuming to keep abreast of the work of other organizations working on the same issues that concern us and we often don't know of the contributions to a problem being made by others.*
>
> — Community Service Society of New York

The SIS will provide a common system to bring together and organize the wealth of available programs, organizations, and materials for senior citizens — both nationally and locally. The SIS will link public libraries, community organizations, senior citizen groups, government agencies, corporations, and business associations with senior programs and other service providers. Eventually, the service will also be available to seniors themselves.

The SIS will contain information relating to health and consumer matters; entitlements; social and community opportunities; employment opportunities; and civic participation.

The Education Fund of SOS (Save Our Security), a broad coalition of the most prominent senior citizen associations, will serve as the administrator and national coordinator. (SOS is led by Dr. Arthur Flemming, former Secretary of Health, Education and Welfare, and Robert Ball, former Commissioner of Social Security.)

Like all PIE services, the SIS will be available through terminals at public access sites such as the public library, senior citizen centers, municipal offices, etc. Development will begin with cooperating libraries at target sites that include Clearwater, Florida, and Baltimore County, Maryland.

The International Network for Environmental Policy

Applying the PIE to international interests, Reference Point is helping to design a major project whose purpose is to safeguard the future of the planet: the International Network for Environmental Policy (INEP).

Founded by the United States Senate and the Interparliamentary Conference on the Global Environment, INEP is a planned computer network for individuals and organizations interested and involved in environmental policy issues. INEP will facilitate international and national coordination of policy — to provide greater consistency in approaching problems that transcend individual regions or nations.

Reference Point is developing INEP in cooperation with the Institute for Global Communication (ECONET) and the Centre for International Environmental Law (London & Washington), and with the advice of distinguished environmental nonprofit organizations, such as the Global Tomorrow Coalition.

Past Activities and Accomplishments

Reference Point's online services and education and advocacy projects have been assisted and guided by consultations with the leadership of the voluntary sector. Since 1987, we have met with more than 100 diverse nonprofit organizations — to explore their informational needs and to introduce the Reference Point vision.

The organizations have ranged widely. Some, such as United Way and the Advocacy Institute, are quite advanced in their use of computer technologies for information sharing and communication. Others, such as the League of Women Voters of the United States, are in the early stages of computerization, but are committed to improving their outreach and efficiency through greater use of information technology tailored to their needs.

Reference Point's image of a more technologically advanced voluntary sector has struck a very responsive chord among these organizations, and many of them are eager to work with Reference Point to create such a future.

Studies and Reports

Reference Point has conducted several research inquiries among voluntary sector organizations to determine how they are being affected by the computerization of federal government information. These inquiries have included a general survey, case studies, and analyses of specific sectors, such as labor organizations. Generally, the reports have found that current information practices are lagging behind technologies and potential, and that this shortcoming affects the level of services and the dissemination of public information.

A Reference Point focus paper presented for the Benton Foundation Consultation on "Electronic Public Information and the Public's Right to Know" (Washington, 1989) stressed the important and complex public policy questions concerning how to facilitate fair and effective access to federal public information by voluntary associations. It questioned the respective responsibilities of the various branches of the federal government, the library community, the voluntary sector, and both commercial and non-commercial information services and networks.

Under a commission from the Congressional Office of Technology Assessment (OTA), Reference Point recently completed a Report on Nonprofit and Academic Applications of Computer and Telecommunication Technologies. The report broadly describes the trends and patterns of use, documents notable examples, and suggests how these may be applied by the federal government to improve public service. The Reference Point paper is one of eight that an OTA panel of experts will use to prepare a report to Congress, scheduled for delivery in 1993.

Provision of information is no longer limited to traditional print resources. With the proliferation of computerized databases and sophisticated telecommunications, in a society that is information dependent, public libraries must embrace technology.... Information technology is vital to the public library mission.

— Technology in Public Libraries Committee, Public Library Association

Copies of Reference Point reports are available by request.

Special Report on the Public Library in the Information Age

Reference Point views the public library as a vital component of any successful effort to enhance public access to public information. Public libraries are an integral part of Reference Point's development plans for the years ahead.

With the cooperation of the American Library Association (ALA), Reference Point's president, Alan F. Westin, and vice president, Anne L. Finger, prepared a special report on the role of public libraries in the new information age. *Using the Public Library in the Computer Age*, based on a recent nationwide survey conducted by Louis Harris & Associates, was published by the ALA in March, 1991.

The report found that public libraries are in transition, evolving into multifaceted community centers that are assuming an increasingly critical role in community life. Library patronage is growing — exceeding 122 million citizens —

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and computerized services are growing as well. Two-thirds of the public want to access library reference resources from home by computer, for example, and many important models for this new electronic library are already in place or under development.

The report, now in its second printing, is available from the ALA.

Advocating Access to Public Information

Advocacy efforts to encourage improved governmental dissemination practices have included testimony by Reference Point's president, Dr. Alan F. Westin, before committees of the Florida legislature at hearings on "The State's Information Policy in an Electronic Age," and the U.S. Congress at hearings on "Federal Information Dissemination Policies and Practices."

> *People are expecting a high level of information delivery and we must provide it in order to achieve short term and long term goals. This is a system concept our program staff has been desiring for years.... Crucial to organizational abilities to respond and to lead constituents.*
>
> — National Trust
> for Historic Preservation

Dr. Westin has also presented Reference Point's survey findings and ideas for strengthening the voluntary sector at various forums and conferences in the United States and Canada. During 1990 and 1991, for example, he participated in the Independent Sector Spring Research Forum in Cleveland, Ohio; Nonprofit '90 at INFORUM in Atlanta, Georgia; IBM's Partnership for the '90s Media Executive Conference in Phoenix, Arizona; the New York Society of Association Executives in New York City; the Canadian Access and Privacy Association's Access '90 Conference in Ottawa; the first national Alliance for Technology Conference in Washington, D.C.; and the Electronic Democracy Conference, also held in Washington.

These appearances underscore Reference Point's commitment to the important ongoing process of sharing information and exchanging ideas with others — with nonprofit organization leaders; the technology community; public interest advocates; government officials; and scholars. In that same spirit, Dr. Westin contributed an article, "The Online Volunteer," to the September/October, 1991, issue of *Foundation News*.

Reference Point's Technical Systems

Because no currently available videotex service or off-the-shelf software met the unique requirements of the Public Information Exchange, Reference Point collaborated with Information Projects Group (IP Group), a research and development firm based in Virginia, to create new systems and software. IP Group has designed and developed the PIE prototypes and is now finishing the software and systems. When this work is completed, IP Group will manage the PIE operations.

For providers who contribute information to the PIE, the system's designed capabilities will mean they can assemble and classify their data and publications in any way they feel appropriate. The data may be easily reorganized to suit any application or purpose.

For users, the PIE's elaborate cross-referencing capabilities and coordination of information will provide assistance and expertise in browsing and searching — pinpointing relevant information far beyond the scope of the user's original search.

A detailed description of the philosophy and development of the PIE systems is available from the Reference Point office.

Fulfilling the Reference Point Vision

In the decades since computerization began transforming the distribution of information, certain observations have gained broad acceptance. Technology itself is neither good nor evil; its impact depends upon how it is used. And information itself does not ensure knowledge — and certainly not wisdom. It is also a tool — an essential tool — that is largely meaningless without context, synthesis, and application.

Thus far, technology has been applied in ways that have well-served the needs of business and government. Both sectors have essentially mastered the ability to access, use, and generate the kind of complex, time-sensitive information that is so essential for functioning in our fast-paced society. The voluntary sector, as we have seen, though it has made great strides in recent years, is not yet a full partner with the other societal segments in terms of computerization. And, for the most part, the public the voluntary sector serves is also not yet connected to computer and information technologies that can help gather important information for daily decision-making.

It is now time to apply the tools of technology and information to promote the strong voluntary sector and well-informed public that are central to our democracy.

Using the PIE to organize bodies of public interest information — economic, social, political, and cultural — Reference Point is uniting people, organizations, programs, and resources in ways that should stimulate efforts to address our societal problems and enrich life in our communities. The key ingredients, referred to in Reference Point's report for the OTA, are in place: "...an understanding and knowledge of the creative uses of technology, combined with leadership and commitment to use them."

The Reference Point Organization

Reference Point is a nonprofit 501(c)(3) organization. Its headquarters are in Teaneck, New Jersey, with other offices in the Washington, D.C., area.

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Mr. Wise. Ms. Golodner.

STATEMENT OF LINDA GOLODNER, PRESIDENT, NATIONAL CONSUMERS LEAGUE, WASHINGTON, DC

Ms. Golodner. Yes, sir. Thank you, Mr. Chairman.

I first want to tell you something about the National Consumers League to put you in the context of where we are in telemarketing fraud.

We are a consumer advocacy organization, organized in 1899 around sweatshop and child labor issues, and we have worked in food and drug safety, environmental consumer issues, and health care reform, as well as telecommunications policy and financial services.

We, of course, access government information daily from reading the Federal Register, to fact sheets from the FTC, and, from time to time, have used electronic information available from the Federal Government. But as the previous witness indicated, it is sometimes very difficult, especially for nonprofit organizations, to sort through material.

We have accessed Food and Drug Administration information, information from the Department of Labor, and from the Environmental Protection Agency. Sometimes it is very difficult, and I hope that you will consider the cost to nonprofits and educational institutions, as well as the cost to our environment in printing so much material. If more were online and available readily to nonprofit organizations, much print could be eliminated.

Today I am addressing telemarketing frauds, and while using the telephone to sell goods and services certainly is a convenience and provides welcome enhanced choice for consumers, it, in turn, provides for the fraudulent operator unlimited opportunities to con money from victims to sell useless goods and nonexistent opportunities, and to obtain credit card numbers that can multiply profits several times.

The success of telemarketing has, unfortunately, generated opportunities for an unsavory category of salespeople. Plying their trade from makeshift offices with many telephone lines, these modern day snake oil salesmen find their victims by way of a phone. Criminals reap a financial bonanza from telemarketing fraud because many of us are not wise about the proper use of the phone in business transactions, or are too trusting, or let our gambling instinct run counter to our reasoning.

Businesses, as well as individual consumers, have been victims of a variety of scams. Paula Lyons this morning, on Good Morning America, reported on one of the latest investment fraud scams—the cellular TV lottery—which is bilking millions of dollars from victims. Professional con artists are able to talk victims out of their money using very slick telephone scripts.

Most consumer protection professionals deal with those who have already been defrauded, and sometimes they get the information 6 weeks later, 2 months later, too late to act. This is particularly frustrating for those who counsel consumers to think before the act, because often people don't focus on the information on avoiding fraud until they actually become victims.

Fraudulent telemarketing relies on its ability to get the customer to act fast and to part with money over the phone using major credit cards or various package or letter express services which can deliver a check or cash within hours. The combination of instant communications, instant transfer of funds, and unscrupulous or fraudulent marketers makes the new generation of consumer fraud difficult to combat.

Some fraudulent telemarketers operate out of so-called boiler rooms, usually motel rooms or furnished executive suites, with banks of phones and other sophisticated telecommunications equipment that some of the consumer protection agencies and even district attorneys and attorneys general don't have. The term "boiler room" refers to both the hidden location of the facilities and the fact that they generate a great deal of pressure.

The location of the boiler room may change daily as law enforcement officers bear down on the fraud or as circumstances change. Many boiler rooms are located in States which do enjoy good climate and/or have a reputation for lax enforcement.

The National Consumers League directs two important projects in telemarketing fraud. One is the alliance against fraud in telemarketing [AAFT]. It is a coalition of 90 organizations, which include several businesses, public interest groups, trade associations, labor unions, law enforcement agencies, consumer reporters, and consumer protection agencies.

At AAFT, members promote cooperative educational efforts aimed at alerting the public to the high incidence of telemarketing fraud and steps to be taken to protect potential victims. Several Federal agencies are members of AAFT, including the Commodity Futures Trading Commission—that is Fowler West's office—the GSA Consumer Information Center, the Federal Trade Commission, the Department of Commerce, U.S. Office of Consumer Affairs, the U.S. Postal Inspection Service, the U.S. Secret Service, and the Small Business Administration.

Our work with these agencies since the founding of this group in 1988 has been very productive. We have coordinated public education efforts, joined together in press conferences announcing top scams in the country, produced joint publications, and have distributed hundreds of thousands of materials—videotapes, fact sheets, and brochures. Some of the materials are distributed through the Consumer Information Center in Pueblo, which I would like to mention is run by dedicated staff.

I know GSA is very proud of its distribution of information, however, so much more information could be distributed to so many more consumers and to organizations if some were done electronically.

The National Futures Association, by the way, has helped provide printing and distribution funds for several of the projects of the alliance.

The second project which Dr. Westin mentioned is the Consumer Protection Network. This project will bring consumer groups, Federal agencies, and businesses on an even par electronically with those who are perpetrating the fraud, so we can try to combat this fraud.

The Consumer Protection Network is designed to provide the high-tech response to the growing problem of telemarketing fraud. It has several components: A national survey to determine the extent of public knowledge, factors which affect vulnerability to fraud, the most vulnerable populations, the knowledge of techniques used by deceptive and fraudulent telemarketing promoters, an awareness of rights and responsibilities when faced with victimization by fraudulent telephone solicitors.

We do know a lot of people don't like to complain. They don't like to let anyone know that they have been a victim. They feel embarrassed; they feel ashamed.

The project has also embarked on a pilot 800 number consumer assistance program, which will provide that anonymous response, anonymous report of the crime—complaint mechanism that will collect information and track the numbers, and the trends of frauds. The pilot will determine the level of interest and the projected volume of complaints to this 800 number consumer referral service on telephone-related fraud.

The pilot will determine the best methods of handling referrals and establish relationships with Federal, State, and local agencies.

The National Consumers League is one of the few private contributors to the FTC/NAAG telemarketing fraud data base—along with the CBBB and State attorneys general and some other Federal agencies.

As you know, this data base has undergone extensive upgrading and the new system should be online, available to users, in the very near future. We will be relaying information from the complaints that we hear to this data base directly from our parallel system and make data in the parallel system available under established protocols to outside organizations.

These outside organizations will also provide information to our system so that we should have a comprehensive understanding daily of fraud on the screen. Hopefully, we can contact consumer protection agencies, district attorneys, and attorneys general about fraud in their area at the time it is occurring.

We will be testing various applications to determine how to handle referrals most effectively and efficiently at the lowest possible cost. In some cases, information alerts to agencies will simply be by fax, because, unfortunately, a lot of consumer protection agencies don't have even the capacity to deal with computerized information at this point.

Let me tell you about how the application would work. For example, we might receive several calls from a West Virginia community about advanced fee loans or job scams, which are very popular scams right now.

We will download information we receive from consumers directly to the FTC and to NAAG and then send alerts to attorneys general or consumer protection agencies throughout the United States. We will alert consumer reporters by way of a press advisory about what is going on and what they can warn the public.

We would also be able to process information that is given to us by companies. We met yesterday with a telecommunications company which often does not know whom to contact regarding information when they detect there is possible fraud. For instance, this particular company has a credit card component. Consumers were asking for extensions of credit because they had gotten a telephone call from a con artist who wanted the consumer to put a large amount on their credit card..

The company was reluctant to tell the consumer that they may be a victim of a scam. When we are in service that information can be given to the Consumer Protection Network. We could then determine patterns, where scams are occurring, and relay that information to enforcement agencies.

As the project develops, we will keep you informed on its progress. We appreciate this opportunity today and would be pleased to answer any questions. I will now turn it back to Professor Westin.

Mr. WESTIN. Thank you.

Linda has described to you what we see as two of the key components of the Consumer Protection Network: The helpline, where individual consumers can call in and be led through a series of expert customer service operator responses, either to make an anonymous contribution of what happened to them or to be guided to a complaint referral system where they would be put in contact with an appropriate law enforcement agency or consumer protection agency. The helpline would, thereby, provide complainants with a source of important information, and the agency—might otherwise not be able to put the resources to collecting a lot of concrete cases—with the complaint resources needed to make out a prosecution.

She also described what we see as the closed or confidential information that needs to be exchanged among and between the law enforcement agencies. It is intelligence information, if you think about the difference between public and private definitions of information. And, obviously, it has to be under very careful safeguards as to privacy and confidentiality in order to avoid any misuse of the system by people who would like to tar their business competitors, or to play out private vendettas against companies they don't like, and so forth.

So many controls and restrictions need to be put in so that the system is not abused.

Behind both of those components, though, lies what we think will ultimately be one of the most powerful uses of the system: Its completely public dissemination of information. We foresee that the self-sufficiency of this project will ultimately depend on having thousands to tens of thousands of subscribers who will want to get the alerts, the notices, the adjudications, all the public record information, the pattern information that will tell them what scams are going on, notification if their name and their products are being used in frauds or scams.

So the underlying economics of this system rests upon thousands of banks being subscribers to the system to learn what these patterns of frauds and scams are that affect them; and of having government agencies of various kinds—law enforcement agencies—consumer protection agencies, senior citizen protection agencies, and so forth, subscribing to the system. In all of these cases, subscribers would pay a relatively modest registration fee and nonprofit rates for accessing the system to get their information.

We foresee that the media will want to subscribe to this because there are—in hundreds of newspapers and radio stations and television stations—consumer protection, consumer action lines, consumer shame-on-you programs, to which we can provide information about the latest fads in scam and fraud techniques which will be of great value.

And I can foresee that people who call in may, if they are asked, be willing to be referred to reporters and to the media, they will then be linked to people who would like to have real people who have had real experiences in order to enrich the media treatment.

So the public information side of the Consumer Protection Network will reach out to business, government, and consumer protection organizations. And one of its primary vehicles—and this gets back to the Reference Point idea—will be to thousands of public libraries throughout the country.

We foresee the Consumer Protection Network going to the reference desks of thousands of public libraries so that a consumer can walk in, and, with the help of a reference librarian, be connected to this system in order to get information or to check on some offer that has been made. Or, if they have been scamed, they will know that by going to the public library, they will be able to get into the system and use it.

Another way that we foresee ultimately the system working is that from your home, if you are on Compuserve, Prodigy, Genie, ultimately the Internet, or any number of gateways, this system will be made available so that you will be able to have access to it. Recent survey data suggest 25 percent of American households now have a home computer, and roughly half of those are already connected by modem to some kind of online service.

By the mid-1990's, I think it is entirely feasible to imagine that after somebody gets a phone call they will say just a minute; they can turn on their computer and check out the scam almost while the person is still on the line holding, and we can get a report of what kind of activity has been going on. We should be at least as swift, then, as the people that are using telephone and computer technology into the home to defraud so that we can give people in homes some kind of response to those frauds.

Let me sum up by saying what I hope we have described to you today shows: If the voluntary sector provides a vehicle through which Federal information of both the confidential law enforcement kind and the public protection kind can be made more available through electronic technology; if it can be linked to State and local government information; if the various private organizations that try to protect consumers can be linked into the system, and if the power of the media to use this information for the largest scale public information can be a part of it, then we really are putting together the kind of information resources that would be at least equal to the high-tech environment in which these crimes are taking place—and the very adept use of high-tech tools that the criminals are now making.

I think to do anything less than that is to fail to recognize our responsibilities in the consumer protection sector, in the Federal protection sector, and in all the other parts of the communities that are trying to protect consumers against this kind of criminal activity.

Thank you.

[The prepared statement of Ms. Golodner follows:]

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TESTIMONY OF LINDA F. GOLODNER, PRESIDENT
NATIONAL CONSUMERS LEAGUE
CO-DIRECTOR, CONSUMER PROTECTION NETWORK
BEFORE THE
GOVERNMENT INFORMATION, JUSTICE AND AGRICULTURE
SUBCOMMITTEE, COMMITTEE ON GOVERNMENT OPERATIONS
U. S. HOUSE OF REPRESENTATIVES
JUNE 4, 1992

Representing Consumers for 93 Years

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Mr. Chairman and members of the subcommittee, the National Consumers League appreciates this opportunity to testify before your subcommittee on the importance of federal information to the public and on innovative methods of disseminating information.

The National Consumers League is the nation's pioneer consumer organization, founded in 1899 to represent consumers on workplace and marketplace issues. We work encompasses advocacy, research and education on food and drug safety, fair labor standards, including child labor, health care reform, consumer environmental issues, privacy and financial services as well as the issue I will be discussing today -- telecommunications policy, specifically telemarketing fraud. We of course access government information daily on our jobs -- from the Federal Register to fact sheets from the FTC -- and we have some limited experience in accessing information electronically from the Department of Labor and the Food and Drug Administration. We have been part of conversations through our capacity of representing the consumer community on the EPA Clean Air Act Advisory Committee regarding the need for the Environmental Protection Agency to provide greater access to information to state agencies and the public in general. In respect to these agencies, the federal government has a long way to go in making important consumer information readily accessible to public interest groups, to communities and to the general public. The cost to nonprofits and educational institutions to access information should be an important part of your considerations, and you should not only consider the cost of being able to provide electronic access but should weigh the great cost to the environment because of the mounds of paper that are generated daily by our federal government.

Today I am addressing telemarketing fraud.

While using the telephone to sell goods and services certainly is a convenience and provides a welcome enhanced choice for the consumer, it in turn provides for the fraudulent operator unlimited opportunities to con money from victims; to sell useless goods or nonexistent "opportunities;" and to obtain credit card numbers that can multiply "profits" several times.

The success of telemarketing has, unfortunately, generated opportunities for an unsavory category of "sales" people. Plying their trade from makeshift offices with many telephone lines, these modern day snake oil salespeople find their victims by way of the phone.

Criminals reap a financial bonanza from telemarketing fraud because many of us are not wise about the proper use of the phone in business transactions, are too trusting, or let our gambling instinct run counter to our reason. Business, as well as individual consumers, have been victims of a variety of scams. Today Paula Lyons on Good Morning America reported one of the latest investment fraud scams -- the cellular TV lottery, which is bilking millions of dollars from victims. "Professional" con

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artists are able to talk victims out of their money using very slick telephone scripts.

Most consumer protection professionals deal with those who have already been defrauded. This is particularly frustrating for those who counsel consumers to think before they act. Fraudulent telemarketing relies on its ability to get the customer to "act fast;" to part with money over the phone using major credit cards or various package and letter express services which can deliver a check or cash within hours. The combination of instant communciatinos, instant transfer of funds, and unscrupulous or fraudulent marketers makes the new generation of consumer fraud difficult to combat.

Most fraudulent telemarketing solicitations result from an ill-considered or impulsive decision on the part of the victim. Hestitation and refusal to make an instant commitment are fatal to a successful fraud. Most reputable telemarketeres or investment counselors will understand a client's need to "think it over." The fraudulant telemarketer, on the other hand, knows that the sale is lost if the client takes a moment to reflect.

Many legitimate firms engage in telemarketing. It is important, therefore, for consumers to be able to differentiate between the legitimate telemarketer and the fraudulent solicitaiton. Typically, the legitimate solicitation will come from a well known company; it will be for a product or service with which the consumer is familiar.

Some fraudulent telemarketers operate out of a so-called boiler room, usually motel rooms or furnished executive suites with banks of telephones and other sophisticalted telecommunciatons equipment. The term refers to both the hidden location of the facilities and the fact that they generate a great deal of pressure. The location of a boiler room may change, as law enforcement officials bear down on the fraud or as circumstances change. Many boiler rooms are located in states which enjoy a good climate and/or have a reputation for lax enforcement. The products offered by these boiler rooms change frequently, as current scams play out and attractive new ones come to the attention of fraudultent dealers.

Some boiler room telemarketers are relocating operations outside the United States to target potential victims within the continental U. S. This is partly the result of stricter enforcement efforts on the part of federal state, and local authorities. By moving operations offshore, the fraudulent dealers become harder to track down. The anticipated result is a new surge of extraterritorial boiler room operations, located in countries which have no extradition treaties with the U. S. or do not consider such practices to be criminal.

The NCL directs two important projects on this issue -- one is the Alliance Against Fraud in Telemarketing (AAFT), a coalition of over 90 organizations -- public interest groups, trade associations, labor unions, businesses, law enforcement agencies, consumer reporters, and consumer protection agencies. AAFT members promote cooperative educational efforts aimed at alerting the public to the high incidence of telemarketing fraud and steps which can be taken to protect potential victims. Several federal agencies are members of the AAPT, including the Commodity Futures Trading Commission (Fowler West's office), the GSA Consumer Information Center, the Federal Trade Commission, the Department of Commerce, U. S. Office of Consumer Affairs, the U. S. Postal Inspection Service, the U. S. Secret Service, and the Small Business Administration. Our work with these agencies since the founding of this group in 1988 has been very productive. We have coordinated public education efforts, joined together in press conferences announcing the top scams in the country, produced joint publications and have distributed hundreds of thousands of materials -- videotapes, fact sheets, brochures through our networks including the Consumer Information Center in Pueblo. The National Futures Association has helped provide printing and distribution funds for several of these projects.

The second project -- one of the newest programs of the National Consumers League -- is our joint project with the Reference Point Foundation -- the Consumer Protection Network. As Professor Westin has testified, the Consumer Protection Network is designed to provide a "high tech" response to the growing problem of telemarketing fraud. It has several components: a national survey to determine the extent of public knowledge of factors which affect vulnerability to fraud; most vulnerable population groups; knowledge of known techniques used by deceptive and fraudulent telemarketing promoters; and awareness of rights and responsibilities when faced with victimization by fraudulent telephone solicitors. The project is also embarked on a pilot 800 number consumer assistance program. It will determine the level of interest in and projected volume of complaints to this 800 number consumer referral service on telephone-related fraud. This pilot will determine the best methods of handling referrals and establish relationships with federal, state, and local agencies.

The National Consumers League is one of the few private contributors to the FTC/NAAG Telemarketing Fraud Database along with the CBBB and state attorneys general and some other federal agencies. As you know, the FTC/NAAG Database has undergone extensive upgrading and the new system should be online and available to users in the very near future. We will be relaying complaints to this database directly from our parallel system and make data in the parallel system available, under established protocols, to outside organizations. These outside organizations will also provide information to our system so that we should have a comprehensive picture of fraud daily "on the screen." We will be testing various applications to determine how to handle referrals most efficiently and effectively at the lowest possible cost. In some cases, information alerts to agencies will simply be by fax. Or even mail in the case of some agencies that are not even to the fax stage of their technological development.

As the project develops we will keep you informed of the progress. We appreciate this opportunity today and will be pleased to answer any questions you may have.

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Mr. WISE. Thank you very much.

Ms. Wallace, are you ready? Should they give you an application form——

Ms. WALLACE. Absolutely.

Mr. WISE [continuing]. To sign up for this?

I was struck by something you said, Ms. Wallace, on the Census Bureau. What do you attribute the change in attitude at the Census Bureau to?

Ms. WALLACE. Well, the timing was a little odd. It happened right after—you may recall there were reports of a census analyst looking into how many Iraqis really died in the Gulf war and came out with a number that was quite high, and it came down just a couple weeks after that.

I don't know if they are related, but the timing was interesting.

Mr. WISE. Well, as one State that lost a Member of Congress in redistricting, we are sensitive to that also. I guess I think that is crucial, because the census data is something that is readily used by a lot of different groups, organizations, and individuals. It is something that can be worked for a lot of different purposes, and I think it is very, very important that it be readily available, particularly the census data.

Ms. WALLACE. I think the thing that is most frustrating to us about it is that it is one of the Federal agencies that over the years has been really the best and the most open. They have a catalog. They have a little handout they are always walking around with. They have experts in every area and who to call, and have really led the way in openness and how to go about doing it right. They have been very aggressive in working with the press and working with the private companies in understanding what people want to know.

For example, after the 1980 census, there was a lot of work that went on that we should have information by zip code, which is not how Census does it, and they sold it to some private companies, and now they have made that sort of part of their standard operating procedure. They had been very responsive, and this has concerned us because—here was a beacon of light and we are concerned that there is a change in that.

Mr. WISE. What concerns me also is that the census data is crucial to any kind of informed policymaking. Whether you are talking about wage income levels, number of indoor toilets, as far as health conditions go, whether you are talking about school age children, you are talking about allocation of funding, any kind of formula that the Congress considers always gets caught up in rural versus urban.

There are so many areas, it seems to me, that it is crucial to have a ready access to information, and that is of some concern. I think it is something that the subcommittee may explore a little more.

Ms. WALLACE. Great.

Mr. WISE. Incidentally, Dr. Westin, what I was looking at when you were talking about, I think Citicorp, I was looking to see if they had made the list of banks that——

Ms. WALLACE. And they did.

Mr. **Wise** [continuing]. Ms. Wallace—I think it is important to get some information exchanged right here.

Mr. **Westin**. We cashed the check already.

Mr. **Wise**. That is what they said about Members of Congress, too.

But you have mentioned, Ms. Wallace, the FOIA, and, you are right, it is not the subject of today's hearing, but it comes up.

Ms. **Wallace**. Right.

Mr. **Wise**. This subcommittee, interestingly enough, does have legislative jurisdiction over FOIA as well as oversight, and I wondered whether it is your opinion that FOIA would be better visited legislatively or would it be better to work to get a more up-to-date application by different agencies to the changes in dissemination of information?

Ms. **Wallace**. I think it is clear that FOIA is necessary. I will relate one experience we had several years ago at USA Today.

We were interested, through the Department of Education, in looking at everyone who had defaulted on a student loan. There was a lot of publicity at that time that this information was available and the Federal Government was going to go after these deadbeats out there.

We requested it through the Department of Education. We wanted names, addresses, everything that was available on these people, feeling like they had taken our government money and we had a right to know who they were. We spent a year going through FOIA. We finally went to court on it and lost based on the reporter committee decision. I think it is clear there needs to be some legislative action to really get through what we need.

Mr. **Wise**. The only hesitation I have to that is that by the time Congress acts on FOIA, dealing with the latest developments in technology, we will probably be another 3 to 5 years behind whatever the new technology is.

My one concern is to encourage agencies to think prospectively and to respond affirmatively, rather then just complying with the narrow legislation.

The other thing is, as I think you well know, when you open up FOIA, we have got ourselves a battle, because it is not just restricted to one group saying this improvement needs to be made. It is every group coming in saying let us tinker with it for a while. So that has been another hesitation.

The direction the subcommittee has taken—and either here or at some future time I would be interested in getting your thoughts—the direction we have taken is not to look at wholesale legislative changes. Instead, we have tried to look at, first, improving agency attitudes toward it, and trying to focus on those agencies that are clearly abusive; second, encouraging agency flexibility, recognizing and changing with the technology, and to take the approach that FOIA, while it may have been conceived in days of hard copy, now should be applied in a flexible way; and, third, working in the OMB, Circular A-130 process to get OMB to try to direct a more positive attitude governmentwide across all the agencies.

I think that we have had a little success with OMB in A-130. There is still more work to be done on it, but I just note that there are problems with trying to come up with an electronic FOIA or something along those lines. I am just afraid that the Congress will always be behind the technology.

Ms. **Wallace**. Yes. I think our concern is that right now so many agencies are saying "we don't have it. Sure, pull up the truck and you can have it but on paper. And, well, in fact, pull up several trucks.

Mr. **Wise**. Here are your 18 boxes of printouts.

Ms. **Wallace**. Right. And I think it is clearly a way to get around it at this point. It is not like they are thinking this is the right thing to do. They know we won't pull up the 18 trucks.

Mr. **Wise**. Dr. Westin and Ms. Golodner, do you believe consumers will have, do have or will have sufficient computer background to be able to access and to make use on a routine basis the information you will be providing?

Ms. **Golodner**. Yes. Some consumers. However, there has to be a combination of information distribution. Telephone access by a help line to either find out information about a fraud and then send information to the consumer is one level. Those that do have a computer at home or have access to a computer, say, in a library or a senior citizen center, then could access the information online.

We are approaching the project knowing that there are various levels of sophistication and technology. It can be very cost effective to help, for instance, some of the consumer protection agencies to have technical capability.

For instance, it would be much easier, for example on recalls, for a consumer protection agency to get that online, rather than simply from a newsletter from the National Association of Consumer Agency Administrators. I think we should try to bring them up to speed using time and cost efficient technology.

Mr. **Wise**. Doctor.

Mr. **Westin**. I think Linda is absolutely right. There is no one answer. I think we have to imagine a consumer population that ranges from older persons, who may not be at all comfortable with computers but can be in a senior citizen center and an expert there can service their inquiry or collect their information and put it in, all the way to a recognition that younger consumers are now quite computer literate, have learned to use computers in school, are used to going to card catalogs, computerized versions of card catalogs in the library, and using them.

So our whole approach has been to say that we have to adopt technology for every single level of knowledge and capability and there is no reason why you should choose one or the other. You can provide everything if you look at the different populations and use the tools that you have.

Mr. **Wise**. I am delighted to hear that, as one who will probably have to use a telephone.

Ms. Wallace, your paper is a national paper. It has resources that are beyond, say, certainly a weekly newspaper and, in many cases, many dailies. I know in my State, even the larger dailies, they can take on one case every few years of a major FOIA case, but in terms of litigation, in terms of fighting for access they are distant from the Federal agency they might be trying to reach—it is a big struggle.

I am curious what thoughts you might have about the resources of others in the media to do, for instance, what you were able to do with the S&Ls or the banks; what you were able to do with the roads, the toxic release summary inventory.

Ms. **Wallace**. It has been interesting how much it has changed in just 4 years. When we began 4 years ago, there were a few other newspapers in the country who would do an occasional project. The Atlanta Constitution did a redlining project that won a Pulitzer several years ago. And there was sort of spotty coverage, but it has really boomed, I think, in the past 2 years.

In fact, one of the editors from my staff is going to a convention next week of investigative reporters and they are planning on about 500 people from all over the country just on computerized journalism.

It has happened because of two things. One is you have to do it. Everything is computerized now and we don't have an option as journalists. We have to know how to do this. The other thing that has happened is we have a younger group of journalists coming in, reporters who grew up on PCs and feel more comfortable with them and are able to access them.

But it is mixed. In some cases people can do it. For example, I think it was the Omaha paper just did something similar on S&Ls and banks that we have done. In some cases the data is so huge and hard to get at, it is virtually impossible.

We have access to two mainframes, we have a 486, we have several 386s. So we have a lot of resources available. We are able to handle in some way pretty much anything that comes in the door. But that is not typical. A lot of people are dealing with the secretary's PC they have to use after hours or borrowing something.

But I think that is changing, too. More and more newspapers are trying to align with universities so they can pick up with their computer resources, and I think that has just changed exponentially in the past 2 years and will continue to change.

Mr. **Wise**. You said in your statement that—and I want to quote—no data base ever speaks for itself. This suggests just providing basic access to the data may not be enough, and what else can you do to ask agencies to provide good data? At what point does the Federal Government agency's responsibilities end, and, if you want to get it in some value added form, you pay somebody else for it?

Ms. **Wallace**. Right. We will take it in any form. I think what we are looking for, though, is somebody who can explain the nuances of a data base.

For example, one thing that comes to mind is the FEC data base. When you buy the tapes, if there is money given back, those are reported one way that is difficult for the computer to read. We really needed somebody in the FEC to be able to explain to us how that worked and how they dealt with it.

It tends to be technical things like that that you need explanation on. Basic stuff, like what is the code book, so you know what everything translates to. The FDIC has been terrific. When we first began working with that data, one of the people came over, sat down with us, went through it, and was really very helpful and a good example. They have also a good data base.

But that is it. I don't think we are asking for "oh, no, we need it in this form because we use Paradox, so please give it to us in Paradox." That is not realistic. People have to be flexible and have to be able to handle technical data in different forms.

I was thinking about the issue brought up by the panel before of should there be a standardized way of doing it. In some ways that would be nice, but, in other ways, what I worry about with electronic FOIA is that finally you get the huge Federal Government to agree on a standard, and by then the technology has changed and the standard is out of date.

Clearly there has to be an easier way to access huge data sets. It is still much more complicated than it ought to be.

Mr. **Wise**. Dr. Westin, when you testified in 1989 you testified about an information aristocracy. Are you feeling better or worse?

Mr. **Westin**. I am optimistic, I think, for several reasons. First of all, a number of witnesses have talked about the arrival of youth with more comfort and competence and readiness to move into new technology, and so what I see in the voluntary sector is that this whole new wave of people that are coming in as the younger staff members are beginning to provide the kind of critical mass inside many organizations that is leading them to say, well, why don't we get data bases and why don't we demand online information and why don't we organize politically to get the voluntary sector represented in some of the Federal information policies?

I think the other thing that is happening is that the technology is becoming sufficiently flexible and interesting that even older citizens, like myself—Linda, I dare say—we have moved to the point where we can——

Mr. **Wise**. You have more guts than I do. I never turn to anybody anymore and say that. As I have gotten steadily older, they ask they not be included with me.

Mr. **Westin**. We are not the most recent college graduates you have had before you, so we can at least take comfort in that.

But the point is she has a power book and I am able to buy a power book, and the idea that people like us would be sitting with the capability of going on the road to give speeches or to do research and to have your computer with you, have it on the plane, that is a revolution that is taking place, and it seems to me that it is coming from both ends.

It is the young people coming into the voluntary sector and it is the capability of the technology to finally make some promises that it can keep to people who did not grow up with it and have to make an effort to master it, that it is becoming sufficiently easy and powerful, that we are all willing to make that commitment in order to learn it.

So if one answer is, is the voluntary sector organizing itself enough so that it can get from the Federal Government information in whatever form it needs to in order to do its job, I think that is getting better than it was in the late 1980's.

I think, on the other hand, we still have the problem of cost, and that is absolutely central. Unless we can have the Federal Government's information available in sufficiently low-cost access or formats so that the voluntary sector can afford to get to it, then technical capability is not itself the answer. We are just priced out of the market in terms of public interest groups and so forth.

That is where I think a little project like ours, where you have united money from the business communities, participation from all the government agencies, and participation, at whatever level they can afford to pay, by public interest and voluntary sector groups with subsidy from the project itself where it is needed—that is a model I think you will see in a lot of other areas of cooperative information systems with different levels of funding and different levels of cost to use it.

Mr. WISE. I want to thank all the witnesses very much for your time and effort you made to appear here and for further educating this committee. Thank you.

[Whereupon, at 12:55 p.m., the subcommittee adjourned, to reconvene subject to the call of the Chair.]

APPENDIXES

APPENDIX 1.—STATEMENTS SUBMITTED FOR THE RECORD

A. NANCY A. BECKER, DIRECTOR, GOVERNMENT INFORMATION DIVISION, UNITED COMMUNICATIONS GROUP

United
Communications
Group
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Written Testimony of
Nancy A. Becker, Director
Government Information Division
United Communications Group

The Government Printing Office -- an agency of the U.S. Congress -- is engaging in policies that restrain commerce, use government funds for highly questionable purposes, and curtail private sector initiatives to disseminate federal information.

Mr. Chairman and members of the Government Information, Justice and Agriculture Subcommittee of the Committee on Government Operations and members of the public, I submit the following written testimony as part of the record to the Public Hearing on "Creative Ways of Using and Disseminating Federal Information."

My testimony is meant to enlighten members of Congress, the public and the federal bureaucracy about the benefits of private sector initiatives for disseminating Federal information and to reveal government policy that is restricting free trade.

United Communications Group (UCG) is a privately held publishing company located in Rockville, Maryland. We publish newsletters, online services, directories, binder services and offer electronic data interchange, e-mail and seminars in the following industries: Energy/Oil, Health, Telecommunications, Federal Procurement, Military/Defense, Financial/Banking, Direct Mail and Delivery Systems.

My experience is based on the past ten years of publishing the Commerce Business Daily (CBD) and related Federal procurement information like the Federal Acquisition Regulation, DoD FAR Supplement to name a few.

Some background about the CBD. Under Title 44, GPO has responsibility for the fulfillment and production of the CBD. For many years it has produced a daily printed edition.

In 1982 through a cost free contract with the Commerce Department many private firms began offering electronic access to the CBD. The Commerce Department was responding to the public's request for more timely and efficient access to the CBD. Instead of spending government funds Commerce allowed the private sector to solve the problem.

United Communications Group – multimedia information company
Newsletters • Guidebooks and Directories • OnLine Information Services • Conferences • Computer Services
Offices in
Los Angeles • Philadelphia • Boston • Brick, NJ

Five years later we brought to market a superior version of GPO's Commerce Business Daily. Our version is a less expensive, more readable alternative to the GPO's printed daily edition. It gets better mail delivery and is better organized.

In addition, we invested over a million dollars to market our version to businesses not getting the GPO version. And we backed our marketing with rapid fulfillment and solid customer service. The private sector is suited to providing these types of services. Government is not. Let me explain why.

Commerce Business Daily by its very nature needs to be marketed. The public has a right to know what the government is spending taxpayer money on, and the right to compete for the business.

Competition ensures the government gets the best contract terms. Whether it is based on lowest cost or technical expertise, the government, thus the taxpayer wins when there is an open and fair contracting process. CBD is vital to creating an open marketplace.

GPO did very little, if any, marketing of the CBD prior to competition from us. It makes sense for the private sector to "test" mailing lists and promotion packages to find potential subscribers. We are risking our money not the government's. Government is not in a position to operate as a business publisher.

Early on in our experience with the CBD we found that many GPO subscribers were fed up with the "government's" publication. GPO's phones are forever busy, or as many customers say: " I got through to the 'jail mail' only to be left on hold forever." In fact, they recently changed the customer service phone number and did not include a message with a forwarding number.

If a subscriber misses an issue of CBD it may take days to get through to GPO and then one is referred to the nearest library. This does not address the timeliness and importance of the information. Nor does their renewal series.

A GPO subscriber gets one renewal notice. If you miss the notice it may take 6 to 8 weeks to start the subscription back up. Imagine the number of opportunities subscribers miss.

Conversely, UCG offers free immediate recovery of missead issues of the CBD. And, a lot of our subscribers get additional customer service about the content of the CBD and who to contact in government to get more assistance in preparing an offer.

Our renewal series is fashioned after what "works" in publishing. We send several notices over the course of 18 weeks so that our subscribers, particularly those that require a purchase order to pay, have ample time to get their renewal back

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to us without missing an issue.

The government's renewal policy reflects the different mindset of the private versus public sector in disseminating information. Getting "something" in the marketplace is the goal of the government. Improving it, or growing it is not always part of their mission. Private sector, on the otherhand, is not successful unless it delivers an affordable, quality product to the marketplace. That is our goal.

Those of us who are in the business of providing CBD tailor our products to what our customers want. These customer requests fell on deaf ears at GPO. This is not news to the public. A lot of these same points were brought to light in a GAO audit in 1987.

The CBD is one example of why the government should not be the "sole" source for disseminating government information. The number of firms providing CBD and the variety of approaches taken are proof that the government should never be the only source for access to federal information.

The private sector has the wear-with-all to respond to the marketplace swiftly. More importantly private initiatives in disseminating federal information effectively keep a "check" on the access for the public.

Private sector investment in new technology, marketing and creative ways of packaging government information are essential. Government must not take away any incentives for the private sector to participate as disseminators, or force undue restrictions on access to the market.

At present, GPO is doing just the opposite. It is making a "profit" renting government lists to companies like mine. And recently it began using taxpayer money to do direct market solicitations aimed at pulling subscribers away from us. A government agency should not be engaging in this activity. It is clearly an abuse of power and effectively puts a restraint on commerce.

B. RONALD L. PRESSER, ESQ., PIPER & MARBURY

ACCESS PRINCIPLES FOR STATE AND LOCAL GOVERNMENT INFORMATION: AN ANALYSIS

Information Industry Association
April 1991

Prepared By:

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SERVING CITIZENS IN THE INFORMATION AGE
Meeting the Challenge of Preserving Access to Information
Executive Summary

THE CHALLENGE

New technologies and fiscal pressures threaten one of the most fundamental of all democratic principles - access to government information. State and local governments are at the frontline of the battle to preserve citizen access to information. The Information Industry Association (IIA) has prepared a paper, Access Principles for State and Local Government Information: An Analysis, which proposes six policy principles to preserve access to government information, foster long-term economic growth and ensure that the information needs of Americans are met efficiently and effectively.

DEMOCRACY AND ACCESS TO INFORMATION

Information - and the ability of citizens to acquire, use and disseminate it without fear of government control or interference - has long occupied a significant role in American society. Freedom of speech, the presumption of citizen access to information and a diversity of information sources are the foundation of U.S. democracy and unique among the community of nations.

Citizens, regardless of whether they are acting in an individual or corporate capacity, require timely and accurate information in order to make informed decisions about their personal, economic and professional lives. Citizens also require access to government information if they are to exercise their right of self-government. Government entities at all levels of democracy have a responsibility to guarantee the ability of citizens to acquire information about the workings of government. Working closely with government in meeting these responsibilities, the information industry offers a diversity of products and services tailored to the specific needs of individual users.

Ironically, as the nation enters the Information Age new technologies and growing fiscal pressures are creating serious challenges which threaten the right of citizens to acquire government information. Nowhere are these challenges more seriously encountered than at the state and local level.

Fortunately, there are guideposts to assist policy officials as they grapple with the challenge of preserving access to government information. Statutes, caselaw, and Federal policy experience provide a storehouse of knowledge upon which state and local officials can draw as they shape the laws, policies, and procedures necessary to guarantee continuing citizen access to government information. To assist policy officials and others with an interest in these vital issues, the IIA's paper, Access Principles for State and Local Government Information: An Analysis, provides a summary of the legal foundation upon which access to information is based and suggests a policy framework to secure this foundation in the Information Age.

A POLICY FRAMEWORK TO PRESERVE ACCESS

The policy framework governing access to government information is based on three fundamental tenets: a broad public right of access; a right of nondiscriminatory access; and a prohibition on government control of information access and use. As discussed in the attached paper, each of these tenets is firmly grounded in the Constitution, legislatively-enacted statutes, and judge-made common law.

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While the tenets underlying citizen access to government information are clear, legislators and policy officials are grappling with their application in an environment in which technologies are rapidly changing the way in which information is created, used, and disseminated. To assist these officials, the Information Industry Association has identified six principles for public access to state and local information that flow from these tenets.

A Diversity of Information Sources Should Be Encouraged

Government laws, regulations, and policies should facilitate public access to government information by encouraging a diversity of sources, including the library community and private sector information industry, to offer or provide access to such information.

The Public Right of Access Should Be Guaranteed

Citizens have a right of access to information held by government entities which should be restricted only by enactment of narrowly drawn statutes necessary to protect certain specific legitimate interests such as privacy.

Access Rights Should Be Unaffected by Record Storage Medium

Laws, regulations, and policies governing public access to government information should apply equally to all information regardless of the media in which it exists.

Equal and Timely Access Should Be Assured

Information held by a government entity should be available to all persons on an equal and timely basis in all reproducible media used by the government entity to store or distribute the information.

Monopoly Control of Government Information Should Be Prohibited

No person, public or private, should have monopoly control over information held by a government entity, nor should government impose or claim any copyright or other restrictions on the ability of citizens to use and disseminate such information.

Fees for Access Should Not Exceed the Marginal Cost of Dissemination

Government should encourage the widest possible dissemination of public information by making it available at a price not to exceed the marginal cost of dissemination.

The legal and policy basis for each of these principles is described in detail in the attached paper prepared for the Information Industry Association by Piper & Marbury. In addition, the paper also describes how these principles serve the long-term public interest of the citizenry. For these reasons, state and local policy officials are urged to incorporate these principles as they draft information policies and statutes.

FOR FURTHER INFORMATION

For a free copy of the Information Industry Association's *Access Principles for State and Local Government Information: An Analysis*, contact the Information Industry Association, 555 New Jersey Avenue, N.W., Suite 800, Washington, D.C. 20001 (202/639-8262).

ACCESS PRINCIPLES FOR STATE AND LOCAL GOVERNMENT INFORMATION: AN ANALYSIS*

I. Introduction

Information long has been recognized as playing an essential role in a democratic political system. As James Madison observed nearly two centuries ago:

> A popular government without popular information or the means of acquiring it, is but a Prologue to a Farce or a Tragedy or perhaps both. Knowledge will forever govern ignorance, and a people who mean to be their own Governors, must arm themselves with the power knowledge gives.[1]

Government information thus is a valuable resource that provides the "people" with knowledge of their government, society, and economy, and with the means to accomplish both public and private goals. Not surprisingly, then, every segment of American society uses some government information to function, including governments themselves, all types of businesses and industries, libraries and schools, the media, and ordinary citizens.

An entire industry has developed aimed at disseminating information, including government information, to the public:

> The large and growing private information industry functions in part by taking public government data, adding value to it, and reselling it to others. There are thousands of private sector information products and services based in whole or in part on government information. The nonprofit sector -- including libraries and public interest groups -- provide similar products and services.[2]

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* Prepared for the Information Industry Association by Ronald L. Plesser and Emilio W. Cividanes of Piper & Marbury, Washington, D.C.

[1] G.P. Hunt, ed., IX *The Writings of James Madison* 103 (1910) (quoting letter to W.T. Barry, August 4, 1822).

[2] House Comm. on Gov't Operations, Paperwork Reduction and Federal Information Resources Management Act of 1990, H. Rep. No. 927, 101st Cong., 2d Sess. 23 (1990) (citations omitted) (hereinafter "1990 House Paperwork Report").

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State and local data form the basis of many of those information products and services. Indeed, a mature information industry has developed around the rich and diverse resource of state and local government information concerning, among other things, real estate and zoning matters; public utilities; commercial (UCC) filings and other corporate documents; statutes and legislative materials; and court and agency decisions.

As James Madison observed, the unrestricted flow of information is essential for the proper operation of our democratic society. As technology changes, and as state and local governments seeking additional sources of revenue contemplate the economic value of the information in their possession and control, questions arise about what information policies should govern agency decisions.[3] Whether the question arises out of a new problem or out of a recurring one that has been considered and solved by other jurisdictions, there already exists a legal framework for addressing these issues which has the salutary effect of promoting the wide dissemination of public information.

This framework has three main tenets. First, the public has a broad right of access to government information. Its source originates from both judge-made common law and from legislatively enacted statutes. These public access statutes are "straightforward device[s] for the release to citizens of information created with tax dollars."[4] They create a concomitant obligation on the government to ensure the flow of public information between government and citizens, and reflect the judgment that the public interest is best served when the government grants access to its records.[5]

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[3] While the main focus of this paper is on public information administered by executive agencies, much of its discussion also applies to public information created and controlled by the legislative branch. For an excellent survey of how state legislatures provide public access and administer their information dissemination systems, see Hawaii House Majority Staff, "Legislative Access in Hawaii: A Report to the House of Representatives by the House Legislative Access Committee" (1990 2d ed.).

[4] Associated Tax Service v. Fitzpatrick, 372 S.E.2d 625, 629 (Va. 1988).

[5] See Techniscan v. Passaic Valley Water Comm'n, 218 N.J. Super. 226, 527 A.2d 490, 492 (N.J. Super. Ct. App. Div. 1987), aff'd, 113 N.J. 233, 549 A.2d 1249 (1988) ("the Legislature made clear that it is the granting of the access by passage of the statute that will accomplish the goal of 'protection of the public interest'").

Second, the government may not discriminate in its dissemination of public information. Our legal system, through its federal and state constitutions, statutes, and judicial decisions, enjoys a long tradition of barring discrimination by governmental authorities.[6] This tradition is at odds with efforts to discriminatorily deny access to information disseminators or otherwise to single them out to bear special burdens.[7]

Third, copyright-like restrictions on the use of public information are antithetical to the goal of widely disseminating government information. The First Amendment to the U.S. Constitution, the Copyright Act of 1976, and other laws consistently support a completely free marketplace in government information. Governments in democratic societies should not exclusively control how their own information can be used. Because the public's use of government information is a right, not a privilege, any person who has acquired public information should be free to use it, sell it, or otherwise disseminate it without paying any additional fees or royalties to the government.

The following pages discuss six principles for public access to state and local information that flow from these tenets. The principles were approved by the Information Industry Association's Board of Directors on July 23, 1990.

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[6] *See*, *e.g.*, *Brown v. Board of Education*, 347 U.S. 483 (1954); *Yick Wo v. Hopkins*, 118 U.S. 356 (1886).

[7] *See*, *e.g.*, *Minneapolis Star & Tribune Co. v. Minnesota Comm'r of Revenue*, 460 U.S. 575 (1983) (prohibiting the taxing of the press differently from other businesses); *Richmond Newspapers v. Virginia*, 448 U.S. 555 (1980) (plurality opinion) (press has the same right to attend criminal trial as the general public); *Legi-Tech, Inc. v. Keiper*, 766 F.2d 728, 734-35 (2d Cir. 1985) (private vendor of information services has right to access same legislative materials that are offered to the general public).

II. Policy Principles for Public Access to State and Local Information

A. Availability of Diversity of Sources

> Government laws, regulations, and policies should facilitate public access to government information by encouraging a diversity of sources, including the library community and private sector information industry, to offer or provide access to such information.

The best way to ensure the flow of information in our society is to encourage a diversity of government and non-government sources of public information. Support for such diversity of sources is an essential feature of government information activities. As underscored by the constitutional and statutory restrictions on government copyright,8/ and by the public access mandate in Freedom of Information statutes,9/ the government should not exclusively control how its own information can be used. Such exclusive control by government is far from the hallmark of a democratic society such as ours.

The requirement of diversity is an affirmative mandate, not a passive one. If a governmental entity believes it necessary to its mission to *disseminate* public data in addition to providing *access* to it, then the government should ensure that the underlying data base is available for redissemination by others. This is particularly the case where an agency is developing a value-added product or electronic application of public data.10/ By ensuring that both the

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8/ *See infra* at 20-23.

9/ *See infra* at 6-9.

10/ *See, e.g.*, *Legi-Tech, Inc. v. Keiper*, 766 F.2d 728 (2d Cir. 1985) (government entity providing value-added information product to the public may not deny a competitor access to the underlying information).

This also is consistent with the recommendation by the 1982 Task Force of the National Commission on Libraries and Information Science ("NCLIS") on the interaction between government and private sector information activities, suggesting that government policy should "[e]ncourage private enterprise to 'add value' to government information (i.e., to

[Footnote continued on following page]

value-added product and the raw data are available, the government ensures that there are several sources of public information.

The public benefits in various ways from having multiple sources of government information. One way is that nongovernmental dissemination of government information helps to make that information available to more users. As noted recently by a committee of the U.S. House of Representatives, nongovernmental redisseminators of government information play an important role in meeting the information needs of the American public:

> [B]oth the public and private sectors play a necessary, legitimate, and distinct role in disseminating government information. By redisseminating government information, the press, libraries, nonprofit organizations, public interest groups, and the private information industry help the government meet the needs of public users by providing information products and services that the government cannot support or that are beyond the bounds of government activities. At times, the private sector, libraries, and nonprofit organizations provide essential products or services to the government that the government is unable to provide for itself. A diversity of information sources for government information, and not a monopoly, best serves the public interest.[11]

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[10] [Footnote continued]

repackage it, provide further processing services, and otherwise enhance the information so that it can be sold at a profit)." NCLIS, *Public Sector/Private Sector Interaction in Providing Information Services* 63 (1983), *quoted in* House Comm. on Gov't Operations, "Electronic Collection and Dissemination of Information by Federal Agencies: A Policy Overview," H. Rep. 560, 99th Cong., 2d Sess. 61 (1986) (hereinafter "1986 House Policy Report").

[11] 1990 House Paperwork Report, *supra* note 2, at 28. *Cf. Techniscan v. Passaic Valley Water*, 218 N.J. Super. 226, 527 A.2d 490, 492 (N.J. Super. Ct. App. Div. 1987), *aff'd*, 113 N.J. 233, 549 A.2d 1249 (1988) (agency's provision of same search service as the requester does not diminish requester's right of access nor public interest served by unrestricted access to public information).

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The public also benefits from diversity because the greater the number of redisseminators of a particular type of information, the more likely it is that someone will package the information in the way that is most useful to, or perhaps cheaper for, a particular class of public users. Also, as a U.S. Senate committee noted recently, "market-driven private sector initiatives often provide needed creativity and flexibility which government cannot."[12] Depriving nongovernmental disseminators of valuable experience in developing information systems to disseminate public information can result in less innovation in the development of information technologies. At the very least, it may impair the ability of agencies and the public to benefit from those technological developments that do occur.

In short, diversity of sources results in more government information getting into the hands of more citizens in ways that are most useful to them. Thus, policymakers operating or developing information dissemination systems should do so with "open-eyed attention to different means of dissemination."[13] One important way, discussed below, is by ensuring that all persons have equal and timely access to the raw information in public data bases at fees not to exceed the cost of dissemination.[14]

B. Right of Access

> Citizens have a right of access to information held by government entities which should only be restricted by enactment of narrowly drawn statutes necessary to protect certain specific legitimate interests such as privacy.

The public's right of access to government information derives from both legislatively enacted statutes and judge-made common law. Many states have modeled or re-fashioned their statutes after the federal Freedom of Information Act ("FOIA"), which was originally enacted in 1966 and has been amended several times.[15] The FOIA requires that each agency of the federal government furnish the public with information which describes the agency's organization and the nature and requirements of all of its functions, as well as with copies of rules of procedures, statements of general policy, final opinions and orders, and staff manuals.[16] In addition, any records not otherwise made available under the Act must be disclosed under a request which reasonably describes the record.[17] The Act creates nine clearly defined and explicitly exclusive exemptions to the FOIA's otherwise mandatory disclosure requirements, exemptions which courts have consistently construed narrowly.[18] Moreover, the Act requires agencies to release all non-exempt segregable portions of otherwise exempt records.[19]

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[12] Senate Comm. on Gov't Affairs, Information Resources Management Act, S. Rep. No. 487, 101st Cong., 2d Sess. 44 (1990) (hereinafter "1990 Senate Report").

[13] Id.

[14] See, e.g., Federal Maritime Commission Authorization, Fiscal 1990, Pub. L. No. 101-92, § 2(a), 103 Stat. 601 (1989) (requiring agency to incorporate these protections into its public information dissemination system).

All 50 states and the District of Columbia have some form of FOIA statute, ranging from the simple statement that there shall be access to public records,[20] to rather detailed instructions on access, exemptions, duplication, and use, often supplemented by judicial decisions and opinions of the state attorney general.[21]

As one commentator noted recently, state laws governing public records "all seem to be different":[22]

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[15] See Comment, "Public Inspection of State and Municipal Executive Documents: 'Everybody, Practically Everything, Anytime, Except * * *'," 45 Fordham L. Rev. 1105 (1977).

[16] 5 U.S.C. § 552(a)(1) & (2).

[17] 5 U.S.C. § 552(a)(3).

[18] See United States Dep't of Justice v. Tax Analysts, 109 S.Ct. 2841, 2851 (1989).

[19] 5 U.S.C. § 552(b).

[20] See, e.g., S.D. Codified Laws Ann. §§ 1-27-1, et seq.; Pa. Stat. Ann. tit. 65, §§ 66.1, et seq.

[21] See, e.g., Fla. Stat. Ann. § 119.01, et seq.; Md. State Gov't Code Ann. §§ 10-611, et seq.; Wash. Rev. Code §§ 42.17.250, et seq.

[22] J. Kidwell, "Essay: Open Records Laws and Copyright," 1989 Wis. L. Rev. 1021, 1027 (hereinafter referred to as "Kidwell Essay").

> These [statutes] are called "open records" laws ...., "public records" laws, and sometimes "freedom of information" laws. Wisconsin enacted the first such statute in 1849; most other states enacted statutes in the early part of this century. The great majority amended their statutes in the mid to late 1970s, perhaps in reaction to Watergate and other controversies, concerning the concealment of governmental information.[23/]

In addition, the common law provides individuals with a limited right to inspect public records.[24/] This cognizable common-law interest in obtaining access to public records, however, does not grant individuals an absolute right to the documents. Rather, a citizen's common-law right to inspect public records requires a balancing of interests: the individual's "personal" or "particular" interest in the information against the public interest in the confidentiality of the file.[25/]

By doing away with the common-law requirement of showing a personal or particular interest, most FOIA statutes have bestowed on the public an unqualified right of access to government records. Nevertheless, however broad the public's right of access may be, it is not unrestricted. As reflected by the narrowly-construed statutory exemptions to the federal FOIA, there sometimes are legitimate interests that justify _some_ restrictions on the public's right of access. Statutory exemptions from disclosure generally have been drawn from a judicial consensus on the proper resolution of cases seeking access to government records. These exemptions are legislative attempts to "predetermine . . . on a categorical basis" the results of the balancing of interests that courts must undertake in the absence of legislative guidance.[26/]

[23/] _Id_. (citations omitted).

[24/] _See, e.g._, _McClain v. College Hospital_, 99 N.J. 346, 492 A.2d 991, 994-95 (1985).

[25/] _Id_. at 995. _See, e.g._, _Casey v. MacPhail_, 2 N.J. Super. 619, 65 A.2d 657 (Law Div. 1949) (where former Supreme Court Justice William Brennan, then a Superior Court judge, ordered that voting lists should be turned over to a candidate for public office because he had a legitimate interest in ascertaining that only those who have a right to vote in the municipal election should, in fact, vote).

[26/] Project, "Government Information and the Rights of Citizens," 73 Mich. L. Rev. 971, 1176 (1975).

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The most commonly recognized exceptions to the public's right of access are: (1) personal information the disclosure of which would constitute a clearly unwarranted invasion of personal privacy; (2) commercial trade information belonging to a private entity and usually either used by the government under contract or required by law to be filed with the government for regulatory purposes; and (3) information withheld for security reasons, *e.g.*, law enforcement investigatory files the release of which could reasonably be expected to disclose the identity of confidential sources.

The scope of these exemptions and the procedures by which the public may test their invocation varies from jurisdiction to jurisdiction, although it is generally agreed that the exemptions must be narrowly construed.

C. Access Rights Unaffected By Record Storage Medium

> Laws, regulations, and policies governing public access to government information should apply equally to all information regardless of the media in which it exists.

Legislatures, courts, and executive officials have usually interpreted FOIA statutes to include public records regardless of the medium in which they exist.[27]

In this Computer Age, access to electronically stored information has become an increasingly important issue. In the increasingly "paperless" environment, restrictions on access to computerized information translate into obstacles -- sometimes insurmountable -- to public access to government information. To distinguish between information stored in paper format and electronic format is to deny the public the same rights of

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[27] *See*, *e.g.*, *Weisberg v. Department of Justice*, 631 F.2d 824, 827-28 (D.C. Cir. 1980) (copyrighted photographs are agency records for purposes of federal FOIA); *Save The Dolphins v. Department of Commerce*, 404 F. Supp. 407, 410-11 (N.D. Cal. 1975) (same for motion picture film); *Lorain County Title Co. v. Essex*, 373 N.E.2d 1261, 1263 (Ohio Ct. App. 1976) (microfilm is an agency record for purposes of state FOIA); 87 Tex. Op. Att'y Gen. ORD-461 (1987) (advising that audio tapes of meetings are public records for purposes of state FOIA) Conn. Gen. Stat. § 1-18a(d) (1988) (definition of "public records" includes audio-video recordings); La. Rev. Stat. Ann. § 44:1 (West 1982) (definition of "public records" includes microfilm as well as audio-video recordings); Md. State Gov't Code Ann. § 10-611 (1984) (same).

access to information maintained by public agencies in electronic file cabinets as it has to inspect government information maintained in the traditional metal drawer.

Fortunately, on the issue of access to electronic information, there is wide unanimity. Many states specifically include computerized information in their public records statutes, either defining public records to include such information,[28] or by other provisions relating to electronic access, searches, or fees.[29]

Whenever the question has been presented to the courts, they have uniformly concluded that electronically stored information is subject to public records laws.[30] Supreme Court Justice Anthony Kennedy, applying federal law while serving as an appellate judge, ruled that "computer-stored records . . . are still 'records' for purposes of the FOIA."[31]

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[28] See, e.g., Cal. Gov't Code § 6252 (Deering 1982); Ind. Code § 5-14-3-2 (Burns Supp. 1989); Md. State Gov't Code Ann. § 10-611 (1984); Mich. Stat. Ann. § 4.1801(2)(e) (Callaghan 1985); Neb. Stat. Ann. § 84-712.01(1) (1987); N.Y. Pub. Off. § 86(4) (McKinney 1988); Okla. Stat. Ann. tit. 51, § 24A.2 (West Supp. 1990); Or. Rev. Stat. § 192.410 (1989); Wash. Rev. Code Ann. § 40.14.010 (Supp. 1990); Wis. Stat. Ann. § 19.32(2) (West 1986).

[29] See, e.g., Fla. Stat. Ann. § 119.085; Iowa Code Ann. § 22.2(3) (West 1989); Kan. Stat. Ann. § 45-219 (1986); Mo. Rev. Stat. § 610.026.

[30] See, e.g., State, ex rel. Recodat Co. v. Buchanan, 46 Ohio St. 3d 163, 546 N.E.2d 205 (Ohio 1989) (agency must make available public records information stored on magnetic tape at the same cost as is charged for copies made from records maintained in paper); Minnesota Medical Ass'n v. Minnesota, 274 N.W.2d 84 (Minn. 1978) (fact that data was stored on computer tape did not affect public status of agency record).

[31] Long v. Internal Revenue Service, 596 F.2d 362, 365 (9th Cir. 1979), cert. denied, 446 U.S. 917 (1980). Accord Yeager v. Drug Enforcement Admin., 678 F.2d 315, 321 (D.C. Cir. 1982).

This also is the view of -- among others -- state FOIA administrators,[32] the Administrative Conference of the United States ("ACUS"),[33] and the American Bar Association ("ABA").[34]

While the law is less emphatic on whether a requester has a right to an electronic copy of electronically-stored public information, the better view is that a requester has (or should have) such a right.[35] As stated by a congressional committee:

> An agency cannot justify denying the public the benefits of new technology . . . . If an agency has developed the ability to manipulate data electronically, it is unfair to restrict the public to paper documents. *An agency must expect to upgrade public access to and use of agency records as its own information capabilities are upgraded*.[36]

Nevertheless, agencies in some instances have denied access to public information in an electronic format on the ground that the same information is available in some other form. For example, a New Hampshire agency refused to provide a computer tape at a cost of $55, insisting instead that the requester (a university researcher) gather the same information from 35,000 cards.[37] In another case, a New York City agency also refused to provide a copy of a computer tape to a publisher, proposing instead that the requester pay for a printout of the information that would have used vastly more computer time than would have been required to produce a tape. Specifically, it would have taken five to six weeks to print, exceed one million pages in length, and cost $10,000 for paper alone.[38]

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[32] Perritt, "Electronic Acquisition and Release of Federal Agency Information: Analysis of Recommendations Adopted by the Administrative Conference of the United States," 41 Admin. L. Rev. 253, 291 n.111 (1989) (citing the Report of the First National Conference on Issues Concerning Computerized Public Records 17 (1987)).

[33] ACUS Recommendation 88-10, 1 C.F.R. § 305.88-10 (1990). *See generally* H. Perritt, *Electronic Acquisition and Release of Federal Agency Information: Research Report Prepared for the Administrative Conference of the United States* (1988).

[34] *See* ABA Sec. of Admin. L. & Reg. Prac., Resolution No. 102 (approved by ABA House of Delegates on Feb. 19, 1990), *reprinted in* ABA, Annual Report of the Sec. of Admin. L. & Reg. Prac., Vol. 27 at 105-122 (resolution and accompanying report).

[35] *See*, *e.g.*, *Associated Tax Service v. Fitzpatrick*, 372 S.E.2d 625 (Va. 1988) (state FOIA requires agency to furnish a computer tape even where the information is available on paper); *Martin v. Ellisor*, 266 S.C. 377, 223 S.E.2d 415 (1976) (state law requires election officials to furnish requesters with a computer tape rather than a printout or microfiche so long as the requester is willing to pay the cost).

[36] See 1986 House Policy Report, *supra* note 10, at 18 (emphasis supplied).

A requester's desire to obtain copies of public information in electronic form is driven by the usefulness of the format. As demonstrated in the New Hampshire and New York cases, agency denials of access to electronic information in electronic form usually are designed to thwart the requester's *use* of the public information. However, as noted by a split Michigan Supreme Court, "[a] public body should not be allowed to thwart legitimate uses of public information by releasing the information in a format difficult or expensive to use."[39] In this regard, the 1986 congressional report stated:

> When dealing with information, distinctions between form and substance are difficult to apply. In many instances, *the form in which information is provided makes a great deal of substantive difference to the way the data can be used*.[40]

The usual excuse for denying electronic access to public information is that the purposes of public disclosure statutes are satisfied by the release of the *information*, even if it is not necessarily in the *form* preferred by the requester.[41] The few agencies and courts adopting this position usually rely on *Dismukes v. Department of Interior*,[42] a rare federal court decision adopting this view.[43]

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[37] *See Menge v. City of Manchester*, 311 A.2d 116 (N.H. 1973) (ordering agency to provide information on tape).

[38] *See Brownstone Publishers v. New York City Dep't of Buildings*, 550 N.Y.S.2d 564 (N.Y. Sup. Ct. 1990) (requiring agency to provide the information in the manner preferred by the requester).

[39] *Kestenbaum v. Michigan State Univ.*, 414 Mich. 510, 327 N.W.2d 783, 802 (1982) (evenly divided court).

[40] 1986 House Policy Report, *supra* note 10, at 36 n.151 (emphasis supplied).

[41] *See*, *e.g.*, *AFSCME v. County of Cook*, 182 Ill. App. 3d 941, 538 N.E.2d 776 (1989).

In *Dismukes*, the plaintiff had sought certain public records on a computer tape. The Interior Department already had the records in both microfiche and computer tape. The agency offered to provide the plaintiff with the requested information but only on microfiche, asserting that microfiche was a more useful form for the public than computer tape. Finding that the tape and microfiche were "equivalent agency records," the court held that Interior did not "improperly withhold" agency records where it released in microfiche the same quantum of information as that requested in tape.

Dismukes rested on the proposition that the FOIA was directed at the release of *information* rather than agency *records*.[44] The agency thus satisfied its obligations under the FOIA where it released the same information in a different format than the one requested.

Not only has *Dismukes* been widely criticized,[45] but at least two developments counsel strongly against continued reliance on that decision. First, a 1989 Supreme Court ruling clearly undercuts *Dismukes*' rationale. In *United States Dep't of Justice v. Tax Analysts*,[46] the Supreme Court unambiguously stated that courts in FOIA cases must direct their analyses at the releasability of agency *records*, not the requesters' ability to obtain the *information* contained in these records in some other fashion.

Furthermore, the Supreme Court in *Tax Analysts* pointed to the wide dissemination of similar information in different forms as a reason why Congress may have declined to exempt all publicly available materials from the FOIA's disclosure requirements:

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[42] 603 F. Supp. 760 (D.D.C. 1984).

[43] *See*, *e.g.*, *AFSCME*, *supra* note 41, 538 N.E.2d at 778-79 (expressly adopting the *Dismukes* rationale).

[44] *See* 603 F. Supp. at 761-62.

[45] *See*, *e.g.*, 1986 House Policy Report, *supra* note 10, at 36 n.151; 16:9 Access Reports 3 (May 2, 1990) (*Dismukes* is "one of the most annoying obstacles still in place from the early days of electronic records litigation").

[46] 109 S. Ct. 2841 (1989).

> [S]uch an exemption would engender intractable fights over precisely what constitutes public availability . . . . In some sense, nearly all of the information that comes within an agency's control can be characterized as publicly available. Although the form in which the material comes to an agency -- i.e., a report or testimony -- may not be generally available, the information included in that report or testimony may very well be.[47]

Thus, the Supreme Court's focus on records rather than information in Tax Analysts, and its observation on the dangers of denying requests merely on the ground that the requested information is publicly available in a different form, both undercut the rationale relied on by the Dismukes court.

Second, the same judge who decided Dismukes recently held that the same agency involved in Dismukes could not deny a requester computer tapes of information that the agency already furnished in paper form.[48] Thus, it would appear that the Dismukes court has overruled itself sub silentio.[49]

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[47] Id. at 2852 (emphasis supplied).

[48] Petroleum Information v. Department of the Interior, C.A. No. 89-3173-JHG (D.D.C. Dec. 22, 1990) ("a standardized data record containing the alphanumeric [version of information] depicted in currently public [agency paper] files" is not exempt from disclosure), appeal filed (Feb. 15, 1991).

[49] But see Coalition for Alternatives in Nutrition and Healthcare, Inc. v. Food & Drug Admin., C.A. No. 90-1025 (D.D.C. Jan. 4, 1991) (where a different judge of the same court relied on Dismukes in ruling that the agency had satisfied its obligations under the FOIA by releasing the requested records in microfiche form rather than in hard copy form).

Another development undercutting continued reliance on Dismukes is the clear intent of the relevant Congressional committees to overturn it reflected in the legislation reauthorizing the Paperwork Act. See, e.g., H. Rep. No. 927, 101st Cong., 2d Sess. 26 n.25 (1990). The information dissemination provisions of the legislation commanded broad bicameral support. The legislation passed the House but stalled in the Senate because of opposition to other provisions. See 48 Cong. Q. 3699 (Nov. 3, 1990), id. at 1130-35 (April 14, 1990).

Most fundamentally, as pointed out by a split Michigan Supreme Court, the rationale for refusing electronic copies of public records is itself bankrupt and could lead to absurd results:

> Following that rationale would encourage a public body to meet its FOIA requests with the response that the actual public document or "writing" cannot be copied, but the agency will gladly produce the same "information" in a "less intrusive" form such as a foreign language, Morse Code, or hieroglyphics.[50]

Thus, some state legislatures have enacted laws designed to accommodate the multi-media needs of "users" of public information. Maryland, for example, grants requesters the right to a "copy" or a "printout" of public records,[51] which are defined as including "computerized record[s]," "recording[s]," or "tape[s]."[52] If the record custodian does not have facilities to make a copy or printout, requesters may have access to records to make a copy or printout using the requester's equipment.[53]

Other states accomplish their desired goal by establishing user fee guidelines. Oklahoma, for example, which provides for "mechanical reproduction" as well as "copying" of records,[54] and defines records as including "computer tape, disk, and record,"[55] prohibits charges "for purposes of discouraging requesters for information or as obstacles to disclosure of requested information."[56]

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[50] *Kestenbaum*, *supra* note 39, 327 N.W.2d at 802.

[51] Md. State Gov't Code Ann. § 10-620 (1984).

[52] *Id*. at § 10-611.

[53] *Id*. at § 10-620.

[54] Okla. Stat. Ann. tit. 51, § 24A.5 (West Supp. 1990).

[55] *Id*. at § 24A.2.

[56] *Id*. at § 24A.5.3. *See also* Ga. Code § 50-18-71 (Supp. 1990) (requiring agencies to "utilize the most economical means available for providing copies of public records"); S.C. Code Ann. § 30-5-30(b) (Supp. 1990) (requiring that records "be furnished at the lowest possible cost" and that they be provided in a form that is convenient for the requester "if it is equally convenient for [the agency] to provide the records in such form").

D. Equal and Timely Access

> Information held by a government entity should be available to all persons on an equal and timely basis in all reproducible media used by the government entity to store or distribute the information.

As the Virginia Supreme Court observed about its own FOIA statute, public access statutes are considered "straightforward device[s] for the release to citizens of information created with tax dollars."[57] By treating public records as belonging to the public, rather than to the government, and by providing such records in a way that facilitates rather than hinders their use, government entities truly advance the goals of public disclosure laws.

Agencies, for example, should not stand in judgment of a person's right to public documents on the basis of the use to which he or she plans on making of them. Such discretion allows agencies to use public information to barter or engage in favoritism. Nevertheless, some agencies have tried to deny a requester access to public information if the requester's purpose is commercial in nature.[58] A citizen's right to public information should not hinge on whether the citizen's efforts to obtain the information are motivated by profit or by purely "private" reasons. Once it is demonstrated that records are "public" in nature and are not otherwise protected from disclosure, a citizen's right of access should be absolute.[59] Indeed, as discussed above, that right is

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[57] Associated Tax Service, supra note 35. 372 S.E.2d at 629.

[58] See, e.g., Techniscan v. Passaic Valley Water, 218 N.J. Super. 226, 527 A.2d 490, 491 (N.J. Super. Ct. App. Div. 1987), aff'd, 113 N.J. 233, 549 A.2d 1249 (1988) (reversing agency's denial of access to public records because of requester's pecuniary motive).

[59] Id., 527 A.2d at 492. Accord Associated Tax Service, supra note 35, 372 S.E.2d at 628-29 (allowing the government to challenge a citizen's motivation "would turn the Act into a battleground for litigation;" purpose or motivation behind request for public information is irrelevant to a citizen's right to records under state FOIA); Title Research Corp. v. Rausch, 450 So.2d 933 (La. 1984) (agency may not deny access to public records simply because requester intends to use

[Footnote continued on following page]

enhanced when access policy encourages the development of a diversity of information sources.

As a split Michigan Supreme Court observed, such equal access is the best protection against political favoritism and other governmental abuse of public records:

> [P]olitical favoritism might well occur if the state is free to distribute useful political materials with unfettered discretion. . . . [U]nder the correct interpretation of the act, the potential for such abuse is eliminated because the requested "public record" must be made available to all persons equally.[60]

Moreover, unequal access is constitutionally prohibited. The U.S. Constitution and the constitutions of the states require governments to carry out their duties in a nondiscriminatory manner. It is well established, for example, that the guiding principle of the equal protection clause of the U.S Constitution is that people who are alike should be treated alike.[61]

Legi-Tech, Inc. v. Keiper[62] illustrates how constitutional values come into play in the dissemination of public documents. There, the U.S. Court of Appeals for the Second Circuit took a dim view of a state statute that discriminated in the dissemination of public information. The statute denied the sale of publicly available services from a state-owned computerized data base to entities offering competing electronic information retrieval systems. The state-owned data base contained the full text of legislation and other related information.

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[59] [Footnote continued]

requested information for commercial purpose); *Hoffman v. Commonwealth of Pennsylvania Gaming Comm'n*, 455 A.2d 731, 733 (Pa. Commw. Ct. 1983) (agency may not deny profit-motivated requester access to public information; a citizen's right to examine public records does not depend upon any other "right, privilege, or immunity" but rather on "whether the documents are within the framework of public records").

[60] *Kestenbaum*, *supra* note 39, 327 N.W.2d at 802 n.32.

[61] *See*, *e.g.*, *Williams v. Vermont*, 472 U.S. 14 (1985) (striking down tax scheme favoring "established" state residents over newer ones).

[62] 766 F.2d 728 (2d Cir. 1985).

Legi-Tech, a competitor of the state-owned service, argued that the law was unconstitutional. The state defended the law as a reasonable protection of the state's "natural monopoly" on computer-supplied legislative information. The state was concerned that resale by Legi-Tech would undercut the profitability of its business.

Besides viewing the state's actions as an exercise of censorship, the court was repelled by the effort at "den[ying] to Legi-Tech the very access to information offered to the general public."[63] Finding that Legi-Tech had a right of access to the data base's information, the court of appeals remanded the case to the lower court for a determination of several factual issues. A settlement was subsequently reached whereby the state commission provides Legi-Tech with access to the information at a negotiated price.

Another settlement, this one involving the frequency and format in which a federal agency disseminated public information, was reached in *Journal of Commerce v. United States Dep't of Treasury*.[64] Claiming unconstitutional discrimination, the plaintiff publisher had sued the U.S. Customs Service to enjoin the agency from providing port authorities with vessel import data via *on-line* computer access to Customs' Automated Manifest System ("AMS"), while furnishing the plaintiff and other members of the public with the AMS data only via *weekly tapes* access. The settlement provides that the agency will furnish the public and the press with *daily* tapes, which contain the same information that it provides the port authorities via on-line access to AMS.[65]

In addition to equal access, the *Journal of Commerce* case also highlights that "information, like money, has a time value."[66] Because of this value, governments should ensure that they provide timely access to information. "A person who receives information ahead of another may have an advantage. Information delayed can be information denied."[67]

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[63] *Id*. at 734. The court also rejected the state's claim that where a government is not constitutionally required to furnish certain information, then the government may discriminatorily deny access to that information without running afoul of the First Amendment. *See id*. at 734-35.

[64] C.A. No. 88-21320-CRR (D.D.C. 1988).

[65] *Cf*. *Price v. Fulton County Comm'n*, 170 Ga. App. 736, 318 S.E.2d 153, 156 (Ga. Ct. App. 1984) (not unlawful for agency to provide public information on tape to a commercial entity provided the agency makes tapes equally available to other members of the public).

[66] *See* 1990 House Paperwork Report, *supra* note 2, at 28.

These judicial decisions underscore that as a matter of both law and policy, the public is best served by ready access to government information, that is, equal and timely access to public records. In this context, "equal" means nonexclusive and nondiscriminatory, and "timely" means without undue delay.

E. No Monopoly or Copyright-like Controls

> No person, public or private, should have monopoly control over information held by a government entity, nor should government impose or claim any copyright or other restrictions on the ability of citizens to use and disseminate such information.

As one court of appeals has stated: "The evils inherent in allowing government to create a monopoly over the dissemination of public information in any form seem too obvious to require extended discussion."[68]

To ensure equal and timely access to public records, government entities must avoid arrangements that afford them *or* any private company or other non-governmental entity with any monopoly power over the public information. The main public policy tenet here is that public information should be disseminated to all. The mere fact that an agency creates or collects the information is no basis for it to grant itself or any other person a franchise over public information. No agency should be able to give itself or any other user or class of users an unfair advantage in the access to (or dissemination of) public information.

As one official of OMB's Office of Information and Regulatory Affairs observed:

> It happens so often that the government is in a monopolistic position with respect to information resources. . . . The least that the government can do [to have marketplace forces operate with regard to the dissemination of public data] is to assure that when the information is disseminated, it is done in a fair

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[67] *Id.*

[68] *Legi-Tech*, *supra* note 62, 766 F.2d at 722.

> and equitable manner so that everyone in the marketplace has an equal chance at the information at the same time.69/

An agency's use of a contractor to operate an information dissemination system on behalf of the agency can create an opportunity for monopolistic control. However, no monopoly control problems will arise if the contractor -- in acting as the agency's proxy -- abides by the same legal and public policy requirements that govern the agency's actions. In other words, a contractor may operate an information dissemination system on behalf of the government if the contractor disseminates information to the public on the same terms that the government would if the government operated the system itself.

To this end, an agency should take all appropriate steps to preclude the contractor from gaining an unfair advantage over others in its non-governmental use or dissemination of the data. As a congressional committee recently noted:

> No agency contractor may be permitted [1] to make use of information -- other than for legitimate agency purposes -- before the information is made available to other public users [or] . . . . [2] to discriminate among public users or [3] to deny, delay, or otherwise limit access or charge higher prices to users who may be competitors with the contractor in the commercial marketplace for agency information.70/

The U.S. Congress already has incorporated these prohibitions into federal law when authorizing public funds for the development of information dissemination systems, for example, at the Securities and Exchange Commission and at the Federal Maritime Commission.71/

69/ 1986 House Policy Report, supra note 10, at 61 n.297 (quoting an article by J.T. Sprehe).

70/ 1990 House Paperwork Report, supra note 2, at 51.

71/ See, Federal Maritime Commission Authorization, Fiscal 1990, Pub. L. No. 101-92, § 2(a), 103 Stat. 601 (1989) (Automated Tariff Filing and Information System ("ATFI")); Securities and Exchange Commission Authorization Act of 1987, Pub. L. No. 100-181, § 1, 101 Stat. 1249, 1251 (1987) (Electronic Data Gathering, Analysis, and Retrieval).

Also in furtherance of the public policy goal of ensuring the widest dissemination of public information, governmental entities should not be free to restrict or regulate the use, resale, or redissemination of public information by the public. Government information is both a public good and an unregulated commodity. If an agency can disclose a government document because its contents pose no threat to government security, or to reasonable personal privacy or confidential business expectations, then no legitimate governmental purpose is served by permitting the agency to limit the public's use of that public information.

Courts, for example, have almost uniformly held that certain types of information are beyond any government control, be it federal, state, or local. Thus, they have rejected attempts at restricting the use of information contained in court decisions,[72] statutes or regulations,[73] and legislative materials.[74]

Copyright is the standard device by which creators of information enjoy the exclusive right to control the use of their work. While the first explicit prohibition against copyright of federal government information dates back to 1895, it was generally recognized before then that copyrighting of government materials was improper.[75] There had been no statute on the subject prior to 1895 "'because none was

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[72] See Wheaton v. Peters, 33 U.S. (8 Pet.) 591 (1834) (denying reporters of Supreme Court decisions copyright on the opinions); Nash v. Lathrop, 142 Mass. 29, 35 (1886) ("all should have free access to the opinions, and . . . it is against sound public policy to prevent this").

[73] See, e.g., Building Officials & Code Adm. v. Code Technology, Inc., 628 F.2d 730 (1st Cir. 1980) (public may not be prohibited from copying the official version of a privately developed building code that had been licensed to governmental agency after it had been adopted as law); State of Georgia v. Harrison Co., 548 F. Supp. 110, 114 (N.D. Ga. 1982), vacated per stipulation, 559 F. Supp. 37 (1983) ("The public must have free access to state laws, unhampered by claim of copyright, whether that claim be made by an individual or the state itself.").

[74] See, e.g., Legi-Tech, Inc. v. Keiper, 766 F.2d 728 (2d Cir. 1985).

[75] See Wheaton, supra note 72; Nash, supra note 72; 1986 House Policy Report, supra note 10, at 24 n.91.

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necessary.''[76] Today, section 105 of the Copyright Act expressly bars the federal government from copyrighting its works.[77]

However, even in the absence of statutory restrictions, the U.S. Constitution restricts federal or state governments from exercising copyright-like controls over public information. As the leading copyright treatise states:

> [O]n a constitutional level any statute which purported to prohibit the reproduction or distribution of governmental documents by reason of the Government's property interest in the ideas or expression contained therein arguably would run afoul of the First Amendment guarantees of freedom of speech and press.[78]

Furthermore, to the extent that many public documents consist of collections of facts, both the First Amendment and the

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[76] *Id*. (citation omitted).

[77] *See* 17 U.S.C. § 105 (1988). The 1976 Copyright Act does appear to contemplate copyright claims by state governments, subject, of course, to constitutional limitations. *See also* Kidwell Essay, *supra* note 22, at 1029-29 (emphasis supplied):

> Some would argue that since nearly everyone agrees that status as a public record does not destroy third-party copyrights, there is no reason to believe that state [FOIA] statutes should be read to destroy governmental copyright claims either. . . . [One possible counter to this argument is] that most open records statutes were written with little regard for the problem of third-party proprietary rights. Therefore, inferences from the preservation of third-party proprietary rights are unjustified. It was probably *assumed* that the vast majority of records subject to the open records laws *would* be governmentally authored. *Lawmakers did not contemplate . . . that these tedious compilations of government information could become commercially valuable*.

[78] 1 *Nimmer on Copyright* § 5.06[B] (1985).

Again, the U.S. Congress already has begun incorporating these prohibitions into federal law when authorizing the use of public funds for the development of information dissemination systems.[82]

Because such controls go against sound public policy and may run afoul of state constitutions and of the U.S. Constitution, state policy makers should not impose copyright-like controls over public information.

F. User Fees: Marginal Cost of Dissemination

> Government should encourage the widest possible dissemination of public information by making it available at a price not to exceed the marginal cost of dissemination.

Common sense dictates that the lower the price that government charges for access to its records, the more people will be able to use public information. On the other hand, when it conditions the release of information upon the payment of a fee determined by the market value of that information, government exercises copyright-like control over public information.

As discussed above, copyright is the mechanism available to creators of information to prevent others from using or reselling their work. These restrictions make information appear in scarce supply, thereby increasing its value. Copyright thus permits information to be sold at a price that reflects the information's value rather than just the cost of its reproduction.[83]

Because as a matter of both law and public policy governments should disclaim any ability to copyright their own information, they should also disclaim any right to include the value of the information to the recipient when establishing a user fee for that information. The government should not make a profit by selling to its citizens public information collected and compiled at taxpayer expense, nor should it impose excessive cost barriers to the development of new information products and services based on public information.

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[82] *See, e.g.*, Federal Maritime Commission Authorization, Fiscal 1990, Pub. L. No. 101-92, § 2(c), 103 Stat. 601 (1989) (ATFI).

[83] *See* 1986 House Policy Report, *supra* note 10, at 24-25.

like Mississippi have adopted an approach similar to the federal approach.[88]

South Carolina, on the other hand, limits fees to "the actual cost of searching for or making copies," but fees may not be charged for examining and reviewing "to determine if . . . documents are subject to disclosure."[89] Similarly, Florida limits its fees to the actual cost of copying, including "materials and supplies" but excluding "labor costs or overhead costs."[90]

By comparison, Texas agencies may recover "all costs related to reproducing the record, including cost of material, labor, and overhead,"[91] while Idaho permits a higher fee for copies of public records in nonpaper formats.[92]

Many jurisdictions also provide for waiver of all or part of user fees where disclosure of the information is in the "public interest."[93]

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[88] *See* Miss. Code Ann. § 25-61-7 (fees must be "reasonably calculated to reimburse [an agency] for, and in no case to exceed, the actual cost of searching, reviewing, and/or duplicating and, if applicable, mailing copies of public records"); *see also* *Roberts v. Mississippi Republican Party*, 465 So.2d 1050 (Miss. 1985) (agency may not charge more than its actual costs for providing licensed driver lists to political organizers).

[89] S.C. Code Ann. § 30-5-30(b).

[90] Fla. Stat. Ann. § 119.07(1)(a) (West Supp. 1990). *See also* 87-1 Op. Att'y Gen. Fla. 1 (1987) (agency may not charge a fee greater than the cost of copying as a way of recouping costs associated with creating government computer programs).

[91] Tex. Rev. Civ. Stat. Ann. art. 6252-17a, § 9.

[92] *See* Idaho Code § 9-338(8) (fee may equal the "direct cost of copying" plus "[t]he standard cost, if any, for selling the same information in the form of a publication").

[93] *See, e.g.*, 5 U.S.C. § 552(a)(4)(A)(ii)(II); Conn. Gen. Stat. § 1-15 (Supp. 1990); Mo. Rev. Stat. § 610.026; S.C. Code Ann. § 30-5-30(b).

INFORMATION INDUSTRY ASSOCIATION

The Information Industry Association (IIA) is a Washington, D.C.–based trade association representing over 650 leading companies involved in the creation, distribution and use of information products, services and technologies. The IIA and its members work closely with policy officials, interest groups, librarians and other interested parties to shape information policies and laws that will benefit both citizens and businesses. Among the issues of interest to the information industry are government information policy, protection of intellectual property, privacy and Freedom of Information issues, telecommunications deregulation and development of the information infrastructure. For further information on the IIA, contact the President of the Association, David C. Fullarton, at:

Information Industry Association
555 New Jersey Avenue, N.W.
Suite 800
Washington, D.C. 20001

Telephone (202/639–8262)
FAX (202/638–4403)

PIPER & MARBURY

This paper has been prepared for the Information Industry Assocation by Ronald L. Plesser and Emilio W. Cividanes of the Washington, D.C. law firm Piper & Marbury. Mr. Plesser serves as Legislative Counsel to the IIA. For further information, contact Mr. Plesser at:

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Washington, D.C. 20036

Telephone (202/861–3969)

C. PETER TRACY, PRESIDENT, MICROPATENT

Statement of

Peter Tracy

President

on the behalf of

MicroPatent

for the record of the

Subcommittee on Government Information, Justice, and Agriculture
Committe on Government Operations

February 19, 1992

MicroPatent, located in New Haven, Connecticut, is a leading publisher of patent information on CD-ROM. We provide monthly updates of patent abstracts and full text of patents, and weekly delivery of facsimile images of complete patents to a broad section of the public, including corporate researchers, academia, legal patent specialists and the small inventor who works out of a basement workshop.

In 1989, using the Full Text File available from the US Patent and Trademark Office, we introduced the first commercially produced patent database on CD-ROM. This database, Automated Patent Searching (APS), a basic search and current awareness tool for US Patents, containing abstract and selected front-page information brings up-to-date patent information to thousands of users every month.

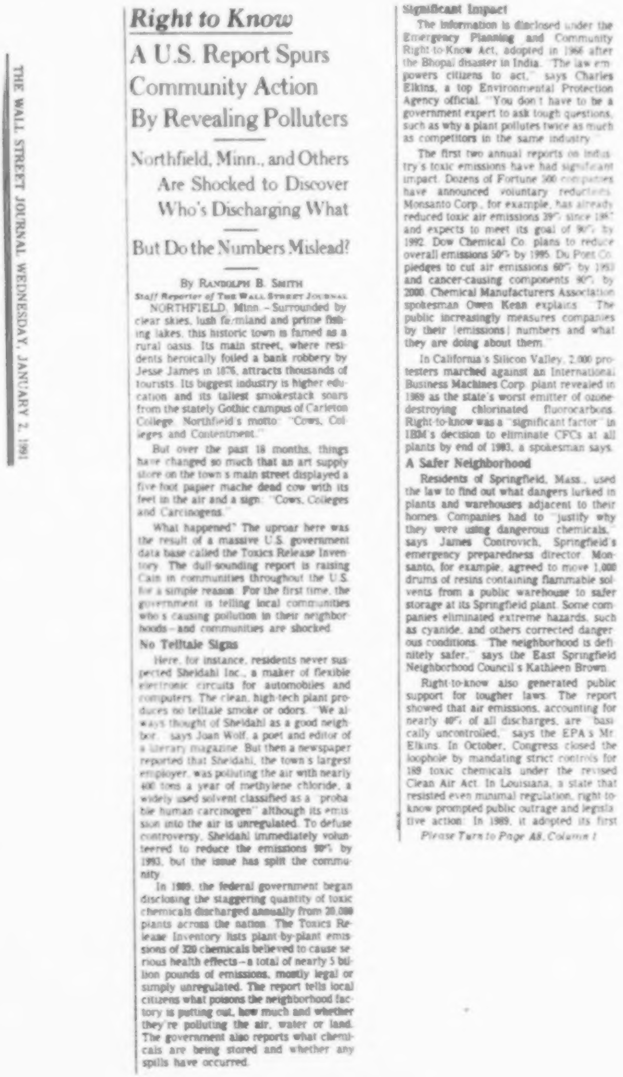
In 1991, using the Patent Image File available from the US PTO, we began publishing PatentImages, a CD-ROM product with complete facsimile of approximately 1,000 patents on each disc. PatentImages provides document delivery of US Patents two weeks after their date of issue. For the first time the public had access to Patents in a new format which allowed more efficient and timely delivery of higher quality patent copies.

In 1992 we are continuing to provide patent information for the public with Chemical PatentImages, a patent database on CD-ROM which provides access to every US Patent in the chemical section of the Official Gazette for the past 17 years.

It is unnecessary for the government to replicate products which are already available from the private sector. Not only does this competition with industry waste taxpayers' money, but it threatens a healthy existing private industry. Government involvement in product creation also incurs the risk that political pressures may result in products that meet particular needs, but not those of the general public. The private sector is able to purchase Federal information to create products more efficiently and at a lesser cost that are tailored to the needs of the public.

It is appropriate and efficient for the government to provide the wealth of information available which facilitates the development of product and creation of innovative formats by private industry.

APPENDIX 2.—ARTICLE FROM THE WALL STREET JOURNAL, JANUARY 2, 1991, ENTITLED "A U.S. REPORT SPURS COMMUNITY ACTION BY REVEALING POLLUTER"



THE WALL STREET JOURNAL WEDNESDAY, JANUARY 2, 1991

Right to Know

A U.S. Report Spurs Community Action By Revealing Polluters

Northfield, Minn., and Others Are Shocked to Discover Who's Discharging What

But Do the Numbers Mislead?

By RANDOLPH B. SMITH
Staff Reporter of THE WALL STREET JOURNAL

NORTHFIELD, Minn.—Surrounded by clear skies, lush farmland and prime fishing lakes, this historic town is famed as a rural oasis. Its main street, where residents heroically foiled a bank robbery by Jesse James in 1876, attracts thousands of tourists. Its biggest industry is higher education and its tallest smokestack soars from the stately Gothic campus of Carleton College. Northfield's motto: "Cows, Colleges and Contentment."

But over the past 18 months, things have changed so much that an art supply store on the town's main street displayed a five-foot papier mache dead cow with its feet in the air and a sign: "Cows, Colleges and Carcinogens."

What happened? The uproar here was the result of a massive U.S. government data base called the Toxics Release Inventory. The dull-sounding report is raising Cain in communities throughout the U.S. for a simple reason: For the first time, the government is telling local communities who's causing pollution in their neighborhoods—and communities are shocked.

No Telltale Signs

Here, for instance, residents never suspected Sheldahl Inc., a maker of flexible electronic circuits for automobiles and computers. The clean, high-tech plant produces no telltale smoke or odors. "We always thought of Sheldahl as a good neighbor," says Joan Wolf, a poet and editor of a literary magazine. But then a newspaper reported that Sheldahl, the town's largest employer, was polluting the air with nearly 400 tons a year of methylene chloride, a widely used solvent classified as a "probable human carcinogen" although its emission into the air is unregulated. To defuse controversy, Sheldahl immediately volunteered to reduce the emissions 90% by 1993, but the issue has split the community.

In 1989, the federal government began disclosing the staggering quantity of toxic chemicals discharged annually from 20,000 plants across the nation. The Toxics Release Inventory lists plant-by-plant emissions of 320 chemicals believed to cause serious health effects—a total of nearly 5 billion pounds of emissions, mostly legal or simply unregulated. The report tells local citizens what poisons the neighborhood factory is putting out, how much and whether they're polluting the air, water or land. The government also reports what chemicals are being stored and whether any spills have occurred.

Significant Impact

The information is disclosed under the Emergency Planning and Community Right-to-Know Act, adopted in 1986 after the Bhopal disaster in India. "The law empowers citizens to act," says Charles Elkins, a top Environmental Protection Agency official. "You don't have to be a government expert to ask tough questions, such as why a plant pollutes twice as much as competitors in the same industry."

The first two annual reports on industry's toxic emissions have had significant impact. Dozens of Fortune 500 companies have announced voluntary reductions. Monsanto Corp., for example, has already reduced toxic air emissions 39% since 1987 and expects to meet its goal of 90% by 1992. Dow Chemical Co. plans to reduce overall emissions 50% by 1995. Du Pont Co. pledges to cut air emissions 60% by 1993 and cancer-causing components 90% by 2000. Chemical Manufacturers Association spokesman Owen Kean explains: "The public increasingly measures companies by their [emissions] numbers and what they are doing about them."

In California's Silicon Valley, 2,000 protesters marched against an International Business Machines Corp. plant revealed in 1989 as the state's worst emitter of ozone-destroying chlorinated fluorocarbons. Right-to-know was a "significant factor" in IBM's decision to eliminate CFCs at all plants by end of 1993, a spokesman says.

A Safer Neighborhood

Residents of Springfield, Mass., used the law to find out what dangers lurked in plants and warehouses adjacent to their homes. Companies had to "justify why they were using dangerous chemicals," says James Controvich, Springfield's emergency preparedness director. Monsanto, for example, agreed to move 1,000 drums of resins containing flammable solvents from a public warehouse to safer storage at its Springfield plant. Some companies eliminated extreme hazards, such as cyanide, and others corrected dangerous conditions. "The neighborhood is definitely safer," says the East Springfield Neighborhood Council's Kathleen Brown.

Right-to-know also generated public support for tougher laws. The report showed that air emissions, accounting for nearly 40% of all discharges, are "basically uncontrolled," says the EPA's Mr. Elkins. In October, Congress closed the loophole by mandating strict controls for 189 toxic chemicals under the revised Clean Air Act. In Louisiana, a state that resisted even minimal regulation, right-to-know prompted public outrage and legislative action: In 1989, it adopted its first

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Right to Know: Massive Government Report Spurs Local Action by Revealing Polluters for the First Time

Continued From First Page

comprehensive law aimed at cutting air emissions in half by 1995.

A Massachusetts advocacy group used the information to show that even the state's computer industries, considered relatively clean, were major polluters. Massachusetts Public Interest Research Group led a campaign that resulted in the nation's strongest toxics use-reduction law, designed to cut chemical wastes 50% by 1997. Right-to-know "created awareness of a real problem that had to be addressed," says John Gould, president of Associated Industries of Massachusetts.

In Massachusetts, Monsanto and Polaroid Corp. have been pilloried for the sheer size of their discharges. Polaroid, for instance, has state permits allowing it to send waste to a sewage treatment plant, which in turn dumps treated waste into Boston Harbor. Although the company insists this is safe, it faces growing public pressure to eliminate waste. Says a Polaroid official: "We could have a very good compliance record and still be accused of being the No. 1 polluter" of Boston Harbor. Polaroid pledged to reduce toxics usage and waste by 10% a year for five years. The company exceeded its goal in 1988, the first year, partly by eliminating mercury in film pack batteries.

Some companies say emissions figures can be misleading. Hoffmann-La Roche Inc.'s Nutley, N.J., pharmaceuticals plant, for example, ranked among the state's top five polluters in reports released in 1988. But environmental groups failed to note that nearly three-quarters of the waste was sent to a sewage treatment plant and converted to harmless carbon dioxide and water, the company says. "You can't just look at emissions totals to measure risks," says Jack Kace, an assistant vice president.

In any event, the numbers don't answer the most basic and troubling questions: Are these emissions a health threat and, if so, to whom? Those were the questions that residents here began asking—and searching for the answers.

A Shocking Report

The flap here started in June 1989, although it took more than the government's report alone to sound the alarm. The Toxics Release Inventory itself is so thick and obscure that it's difficult to compare plants or industries without a computer. Moreover, the report gives no indication of health risks. So environmental groups like the Natural Resources Defense Council pore through the data and release their findings. In 1989, the council listed the nation's biggest emitters of 11 known or probable cancer-causing chemicals—and Sheldahl was ranked 45. That was picked up by wire services and published by the Minneapolis Star-Tribune, which is where the people of Northfield, population 14,000, first saw the news.

They were amazed. Sheldahl had been sending methylene chloride into the air for more than 25 years, but no one outside the plant knew it. Susan Lloyd, a special education teacher, tried to figure out what it meant. She called a dozen public officials to no avail, but she did glean crucial information: The state was about to renew Sheldahl's five-year emissions permit, which imposed no controls on methylene chloride. Citizens could demand a public hearing. She and friends collected 300 signatures on a petition forcing the state to delay the permit.

Sheldahl hoped to blunt the issue. A week after the news broke, the company unveiled a dramatic plan to reduce methylene chloride usage 90% by 1993. Sheldahl would gradually switch to flammable solvents that don't cause cancer. A spokesman, Mark Ester, says the right-to-know report was "a factor, but not the only reason" for proposing the reduction plan. Beverly Brumbaugh, a vice president, says it "was not a driving factor at all. We felt for some time that all emissions needed to be reduced." He points out that Sheldahl had been working to reduce methylene chloride emissions since 1986 and had already installed a $1 million incinerator.

'No Significant Risk'

To allay any fears, Sheldahl organized a plant tour for city officials and residents. Company officials proudly committed to reduce annual emissions from 400 tons to 40 tons in only three years and eliminate them by 2000. They assured residents that methylene chloride posed "no significant risk."

The plant tour backfired. Jacob Freeze, an artist-turned-activist, was furious. He knew the federal government had identified methylene chloride as a probable carcinogen in 1985. He accused the company of keeping the pollution a secret and failing to warn the community. Recalls Ms. Lloyd, the teacher: "The impression was that Sheldahl was trying to cover up."

Sheldahl officials say the company has already spent nearly $5 million to phase out the solvent and can't afford expensive recovery equipment to stop emissions in the interim. James Donaghy, president and chief operating officer, says Sheldahl is moving "as quickly as we know how" without losing customers. "We are trying to balance all our constituencies," he says.

Residents quickly formed an organization, Clean Air Northfield, to investigate the health threat. Faculty at Carleton and St. Olaf College provided technical help.

The town became divided. Homemaker Sueanne Johansen points to the lush expanse of green grass between Sheldahl and the trailer park where she lives. "Our children play out there," she says. "Sheldahl tells us there are 'acceptable levels' of that stuff. Who are they kidding?" Yet her next-door neighbor, Patricia Sraen, has complete faith in Sheldahl, where she has worked 17 years as a data clerk. "It's the college professors blowing things out of proportion," she says. "They think manufacturing is a dirty word."

Uneasy Workers

Mr. Freeze campaigned for zero emissions by picketing, staging a sit-in and even secretly taking pictures on the plant's roof. His threats to "shut down the plant" alienated many of Sheldahl's 650 plant workers, who were already jittery about job security. The workers wanted methylene chloride eliminated, but on a "reasonable" schedule that would protect "jobs and money," says Robin Kruger, a plant steward for the Amalgamated Clothing and Textile Workers Union.

The union also feared that recovering the solvent inside the plant would increase exposure risks and perpetuate its use. After threatening a strike, the union won the right to enforce Sheldahl's 90% use-reduction plan through its labor contract.

Joining forces, the union and activists pressured the state for tougher regulation. As a result, for the first time, the state required an existing plant to reduce cancer risks below a strict threshold. Sheldahl, which has already reduced methylene chloride emissions by nearly two-thirds, would have to cut them 93% by 1996 under the state's proposed emissions permit. If citizens hadn't gotten involved through right-to-know, "there wouldn't be any restrictions in the permit," says Lisa Thorvig, the Minnesota Pollution Control Agency's air compliance chief.

Some Northfield residents aren't satisfied. Clean Air Northfield is lobbying the state to mandate faster reductions and zero emissions in 1995. Sheldahl says that just isn't possible. Further skirmishes are likely before the final decision on the permit later this year.

Whatever the outcome, though, remarkable progress has already been made in reducing methylene chloride risks for residents and workers alike, says Michael Pemrick, a Sheldahl maintenance worker. He says right-to-know provided the catalyst. "Once the community got involved," he says, "there was tremendous pressure on Sheldahl to work much more expediently to reduce the risks."

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APPENDIX 3.—WORKING NOTES (JULY–AUGUST 1991 AND SEPTEMBER–OCTOBER 1991)

WORKING NOTES
ON COMMUNITY RIGHT-TO-KNOW
July-August 1991
A WORKING PAPER ON OUR RIGHT-TO-KNOW ABOUT TOXIC POLLUTION

Right-To-Know *More* Bill Introduced

On July 11, Congressman Sikorski (D-MN) introduced the Community Right to Know More Act of 1991 (H.R. 2880). This legislation represents the most significant Congressional activity on community right to know since passage of the Emergency Planning and Community Right to Know Act of 1986.

The proposal expands current "Toxics Release Inventory" (TRI) reporting requirements for industrial toxic emissions. Current TRI data are a valuable source of environmental information, but include only an estimated 5% of all toxic emissions.

In outline, the Community Right to Know More Act will:

- expand the list of right to know chemicals;
- broaden the scope of covered facilities;
- initiate reporting on toxic chemical use and production;
- improve current hazardous waste reporting requirements;
- require facilities to plan how to reduce toxic chemical use.

Other provisions will: require reporting on peak release rates; close a loophole that exempts off-site recycling; establish grants and technical assistance programs for toxics use reduction; and, study ways to improve electronic reporting and data access.

Chemicals and Facilities Added

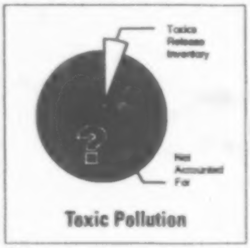
The proposal adds more than 500 chemicals that are regulated as toxic under other environmental laws to the current right to know list. These include chemicals regulated under the Clean Water Act, the Safe Drinking Water Act, federal pesticide laws, and hundreds of carcinogens and reproductive toxins.

Release data for these chemicals is important for two reasons. First, the data disclose risks to public health and the environment. Second, the data expose ineffective environmental laws and help citizens hold government and industry accountable.

The bill also extends reporting to non-manufacturing and federal facilities. Non-manufacturing industries include: hazardous waste management, transportation, mining, electric utilities, solvent recovery, and incineration, among others. These sources account for massive toxic pollution.

Data for Prevention

The legislation establishes a substantial information base on chemical use and production, an essential component of any successful pollution prevention program. Chemical use data is essential to shifting industrial decision-making from end of the pipe controls to front of the pipe reductions in toxic chemical use. Unlike emissions reduction initiatives, such as EPA's Industrial Toxics Project (or "33/50 project"), programs based on chemical use data can consistently prevent toxic releases without shifting risks between workers, consumers and the environment.



Planning for Prevention

The bill requires facilities to draw up plans to reduce their use of toxic chemicals. The plans must include two and five year goals and explain how the company will achieve them. After five years, EPA is authorized to set minimum performance standards for selected industries. The standards are based on the performance of the best companies in any one industry.

In addition to standards, the bill provides important support to state toxics use reduction programs. Such support builds an infrastructure of know-how, and increases knowledge and familiarity with toxics use reduction opportunities. A grants program will help states make technical assistance available to businesses.

Congressional Action

The proposal is already generating debate reminiscent of the intense, and often distorted, opposition that surfaced during consideration of the Right to Know Act in 1985. (Key TRI provisions passed by a one vote margin, 212-211, on December 10, 1985.) Opponents claimed that communities would be overwhelmed with information, small businesses devastated, family farms destroyed and industry beset with financial burdens, among other ills.

In recent floor statements, Congressman Sikorski stated that:

> "They said it was radical. They said it would cost money. It was unworkable, unfair, un-American. Now EPA touts it. Wall Street embraces it. And big companies report they are saving millions of dollars as they cut chemical use."
>
> "They said it would confuse — even harm — communities by giving them meaningless and unnecessary statistics."

The refrain is familiar. The Chemical Manufacturers Association recently claimed in Congressional testimony that expanding TRI threatens to inundate the public with "unexplained statistics that do nothing more than create unnecessary worry and fear."

EPA now supports general expansion of TRI, but cautions that it needs the resources to handle expansion, and advocates setting priorities among adding chemicals, facilities and types of data. The agency also seeks inspection authority to aid enforcement.

The bill amends the Resource Conservation and Recovery Act (RCRA), the nation's main waste management law. A toxics use reduction program is an essential component of RCRA; the fewer toxic chemicals used, the less toxic waste generated. As of early August, the bill had 77 Congressional co-sponsors.

Resources - Contact the Working Group for: a section-by-section summary of H.R. 2880 (5p); a fact sheet (2p); a Q & A sheet (3p); and, incredible but true floor debate from 1985 (6p). For co-sponsor information call 202/225-1772. For a copy of H.R. 2880 call 202/225-3456.

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Reports Using Toxics Release Inventory (TRI) Data

Updated July 1991

Working Group On
Community Right To Know

Contact: Paul Orum
(202) 546-9707

This compendium of more than 100 reports documents widespread use of data generated under Toxics Release Inventory (TRI) provisions of the Emergency Planning and Community Right to Know Act of 1986 (EPCRA, or SARA Title III).

Background:

Congress hotly debated right to know. Chemical companies and the U.S. EPA fought against public reporting. Portions of TRI passed by only a one-vote margin (212-211) on Dec. 10, 1985.

Since its final passage in 1986, TRI has sparked extensive interest from the public, press, regulators, legislators, and industry. The TRI database is now widely recognized as a valuable source of environmental information. Armed for the first time with equal access to environmental data, citizens are leading a nationwide movement to prevent toxic pollution and enforce environmental laws.

The Toxics Release Inventory:

The law requires manufacturers to report to EPA on their environmental releases and off-site transfers of some 330 toxic chemicals in wastes. EPA must computerize this information into a "Toxics Release Inventory" (TRI) and make it available to the public. The TRI database is the first publicly accessible on-line computer database ever mandated by federal law.

Limitations:

- Many common toxic chemicals are not on the right to know list;
- Non-manufacturers and federal facilities are exempt;
- Annual reporting does not reveal peak release rates;
- Facilities ordinarily calculate, rather than measure, releases;
- Wastes transferred off-site for "recycling" are not reported;
- Non-compliance is roughly one in three covered facilities;
- Emissions data cannot be used to track pollution prevention;
- Chemicals in products (as opposed to wastes) are not reported;
- As much as 95% of all toxic emissions are not covered by the law.

The Right to Know More:

In June 1991, the U.S. General Accounting Office reported that up to 95% of all chemical emissions may escape reporting under current law. On July 11, Congressman Sikorski (D-MN) introduced the "Community Right to Know More Act of 1991" (HR 2880). In outline, the bill:

- expands the list of right to know chemicals;
- broadens the scope of covered facilities;
- initiates reporting on toxic chemical use and production;
- improves current hazardous waste reporting requirements;
- requires facilities to plan how to reduce their use of toxic chemicals.

Some Notable Reports:

These reports are listed under National Reports (Public Interest Groups).

- For detailed state-by-state data, see "Poisons in Our Neighborhoods: Toxic Pollution in [State];"
- For national data by parent company, see "Manufacturing Pollution: A Survey of the Nation's Toxic Polluters;"
- For information on chemicals and facilities *not* covered by TRI, see "The Right to Know *More*;"
- For background on the need for chemical use and production data, see "Toxic Truth And Consequences;"
- For reports analyzing fictitious emissions reductions, see "Phantom Reductions: Tracking Toxic Trends." See also, "Manufacturing Pollution" (as above, Appendix XI) and "The 'Recycling' Loophole."

STATE AND LOCAL REPORTS (PUBLIC INTEREST GROUPS)

Reports are listed alphabetically by state, and chronologically by organization.

CALIFORNIA

California Public Interest Research Group
1147 So. Robertson Blvd. #203
Los Angeles, CA 90035
(213) 278-9244

Toxic Hazards In Los Angeles County.
Apr. 1989, (1987 data), 30p.
This report discusses LA's toxic releases - which would fill an end-to-end stack of 55 gallon drums 110 miles high - in the context of toxics use reduction and the limits to risk assessment.

Industrial Toxic Pollution in California: An Industry by Industry Analysis of Chemical Releases and Opportunities for Toxics Use Reduction.
Jul. 1989, (1987 data), 40p.
This report presents California's toxic release data and outlines a state toxics use reduction program.

The Good, The Bad And The Toxic.
Mar. 1990, (1987/88 data), 30p.
The study investigates year-to-year changes in TRI releases reported by California's largest emitters.

Citizens for a Better Environment
501 Second St., Suite 305
San Francisco, CA 94107-1431
(415) 788-0690

Richmond at Risk: Community Demographics and Toxic Hazards from Industrial Polluters.
Feb. 1989, (1987 data), 50p.
This hefty study analyzes toxics-release reports together with demographic data to reveal the disproportionate toxic burden borne by low income, minority citizens.

CALIFORNIA *(continued)*

A Fragile Shield Above the Golden State: California's Contribution to the Chemical Destruction of Earth's Protective Ozone Layer.
Apr. 1989, (1987 data), 34p.
This report assesses destruction of the earth's stratospheric ozone layer, looking at chemical production, products and uses, health effects, existing regulations, policy recommendations and citizen action.

Environmental Health Coalition
1717 Kettner Blvd., #100
San Diego, CA 92101
(619) 235-0281

Communities at Risk: Your Right to Know about Toxics in San Diego.
Apr. 1990, (1987/88 data), 56p.
This report inventories chemicals used, stored and released in San Diego area communities and proposes preventive solutions to the hazards posed. Four-page community fact sheets with illustrative maps accompany the report.

Silicon Valley Toxics Coalition
760 N. First St., 2nd Fl.
San Jose, CA 95112
(408) 287-6707

Title III Emissions Data for Silicon Valley Industry — By Company.
Aug. 1988, (1987 data), 50p.
This relatively simple, prototype report was one of the earliest reports using TRI data to list specific polluters.

1988 Silicon Valley Title III Emissions Report.
Feb. 1990, (1987/88 data), 100p.
This analysis compares 1987 and 1988 toxics-release data.

FLORIDA

Florida Consumer Action Network
4100 W. Kennedy Blvd. #208
Tampa, FL 33609
(813) 286-1226

Florida Toxics Project 1990.
1991, (1988 data), 72p.
This volume presents unanalyzed TRI data on releases of known and suspected carcinogens in Florida.

ILLINOIS

Citizens for a Better Environment
407 S. Dearborn, Suite 1775
Chicago, IL 60605
(312) 939-1530

Toxic Air Pollution in Illinois: An Analysis of 1987 Toxic Release Inventory Reports.
Feb. 1989, (1987 data), 73p.
Produced in conjunction with the Chicago Lung Association, this thorough compilation of TRI reports yields a good look at toxic emissions in Illinois, with a focus on air toxics.

IOWA

Iowa Chapter of the Sierra Club
3500 Kingman Blvd.
Des Moines, IA 50311
(515) 277-8868

Toxic Pollution in Iowa.
Apr. 1991, (1989 data), 18p.
This brief study outlines storage, toxicity and emissions for Iowa's top two dozen facilities.

Iowa Citizen Action
1476 First Ave., Suite 1
Iowa City, IA 52242
(319) 354-8116

A Toxics Legacy: The Industrial Toxics Problem in Iowa.
Apr. 1991, (1988 data), 4p.
This simple fact sheet uses reported toxic releases to help illustrate the need for toxics reduction.

LOUISIANA

Greenpeace USA
1436 U St., NW
Washington, DC 20009
(202) 462-1177

Toxic Waste And Mortality in Louisiana's Chemical Corridor.
Nov. 1988, (1987 data), 57p.
This report compares the nation's highest concentrations of TRI releases to elevated local cancer and mortality rates.

MARYLAND

Maryland Public Interest Research Group
3110 S. Campus Dining Hall
University of Maryland
College Park, MD 20742
(301) 454-5601

A Future Too Bright.
Aug. 1989, (1987 data), 18p.
The effects of stratospheric ozone depletion are linked to sources of ozone depleting chemicals, by company, for Maryland. Included are brief proposals, including safer alternatives.

Natural Resources Defense Council
1350 New York Ave., NW #300
Washington, DC 20005
(202) 783-7800

Toxic Air Pollution in Maryland.
Aug. 1988, (1987 data), 81p.
This report, by NRDC, Sierra Club Potomac Chapter, Maryland Waste Coalition, and American Lung Association of Maryland, is a comprehensive statewide analysis of TRI. It includes revealing tables, graphs and figures.

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MASSACHUSETTS

Massachusetts Public Interest Research Group
29 Temple Place
Boston, MA 02111
(617) 292-4800

Toxic Hazards in Massachusetts.
Nov. 1988, (1987 data), 35p.
This report played an essential role in documenting toxic pollution in Massachusetts during MassPIRG's successful campaign for state toxics-use reduction legislation.

Toxic Pollution in Massachusetts: An Industry by Industry Analysis of Chemical Releases and Opportunities for Toxics Use Reduction.
Apr. 1989, (1987 data), 30p.
This report focused attention on industries with the largest toxic releases and helped spur negotiations that led to the passage of Massachusetts' Toxics Use Reduction Act of 1989.

Local Error, Global Terror: A Two-Year Assessment of Ozone Depletion by Massachusetts Industry
Sep. 1989, (1987/88 TRI), 33p.
This report documents a general lack of progress by Massachusetts companies toward halting the release of ozone destroying chemicals, and outlines steps toward safer alternatives.

National Toxics Campaign
1168 Commonwealth Avenue, 3rd Floor
Boston, MA 02134
(617) 232-0327

Third Annual Report on Toxic Discharges into Boston Harbor.
Mar. 1989, (1988 data), 27p.
Although not primarily a TRI report, this analysis of Boston Harbor polluters contains a revealing comparison of inconsistent discharge data from TRI reports, state and federal sources, and the National Toxics Campaign's own testing.

MICHIGAN

Clean Water Action/Fund
Ecology Center of Ann Arbor
PIRG Toxic Action
Public Interest Research Group in Michigan

Danger: To The Ozone Layer in Michigan.
Jul. 1989, (1987 data), 10p.
A brief history of the ozone depletion crisis is covered with data on the contribution of Michigan companies.

Downriver Citizens for a Safe Environment
3407 20th
Wyandotte, MI 48192
(313) 281-3265

Wyandotte: A Chemically Dependent City.
Dec. 1989, (1987/88 data), 35p.
This waste audit compares 12 local companies' 1987 and 1988 toxic releases in the context of disposal vs. toxics-use reduction. Of note are attempts to obtain internal hazard assessments from some companies.

Chemical Exposure Downriver; Progress and Problems.
Sep. 1990, (1988/89 data), 78p.
This citizens' analysis updates a previous report (see above), using broad ranging sources to assess the potential impacts of toxic chemical use and exposure.

PIRG in Michigan (with the Ecology Center of Ann Arbor and Sierra Club)
212 South 4th Avenue, Suite 207
Ann Arbor, MI 48104
(313) 662-6597

Out of Control: Air Pollution Controls and Toxic Air Emissions in Michigan.
Nov. 1989, (1987 data), 15p.
The authors analyze TRI reports, finding that the vast majority of Michigan's toxic air emissions are entirely uncontrolled by pollution control equipment.

Paul Mohai, School of Natural Resources
University of Michigan
430 East University
Ann Arbor, MI 48109-1115
(313) 763-4598

Environmental Inequity in the Detroit Tri-County Area.
Apr. 1991, (1988 data), 116p.
Prepared by students, this academic report incorporates TRI data and other factors into a broader analysis of the impact of race and income on attitudes about, and proximity to, polluting facilities.

NEW JERSEY

Bound Brook Citizens Association
134 W. Maple Ave.
Bound Brook, NJ 08805

Toxic Chemical Releases from American Cyanamid.
Aug. 1989, (1987 data), 4p.
This single facility profile demonstrates a "waste audit," an increasingly popular citizens' tool used to press companies to reduce toxic pollution.

Toxic Chemical Releases from American Cyanamid; A Revised Look.
Mar. 1990, (1987/88 data), 4p.
Bound Brook citizens updated their earlier review to look at 1987-88 reporting changes.

New Jersey Public Interest Research Group
11 North Willow St.
Trenton, NJ 08608
(609) 394-8155

Middlesex County: Hazardous to Your Health? An Inventory of Toxic Releases in Middlesex County.
Feb. 1989, (1987 data), 26p.
This study, with companion Bergen and Gloucester County studies, utilized TRI and New Jersey Air Pollution Enforcement Data System reports in a state toxics-use reduction campaign.

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NEW JERSEY *(continued)*

Toxic Trends; New Jersey's Most Toxic Dischargers 1987-88 And Their Progress Toward Pollution Prevention.
Oct. 1989, (1987/88 data), 18p.
This report pioneered statewide analysis of year-to-year changes in reported releases.

Permit to Pollute: A Study of Toxics Discharged to New Jersey's Sewers.
Mar. 1990, (1987 data), 16p.
"Permit to Pollute" documents the flood tide of pollutants that pass unregulated through New Jersey sewers, arguing that strict controls are needed.

Chemical Consequences: An Investigation of Toxic Chemical Use and Its Impact on New Jersey.
May 1990, (1987 data), 44p.
"Chemical Consequences" is the precursor report to "Toxic Truth And Consequences" (see National Reports); it uses New Jersey's chemical use information to examine chemical hazards that are not documented by TRI.

Risky Business: An Industry by Industry Investigation of Toxic Releases in New Jersey.
Nov. 1990, (1988 data), 24p.
"Risky Business" looks at the share of TRI releases contributed by each industry, and the need for pollution prevention legislation.

NEW YORK

Citizens Environmental Coalition
33 Central Ave.
Albany, NY 12210
(518) 462-5527

Comm. Envir. Health Ctr at Hunter College
425 East 25th St., Box 596
New York, NY 10010
(212) 481-4355

Consumer Policy Inst./Consumers Union
256 Washington Street
Mt. Vernon, NY 10553
(914) 667-9400, ext. 455

Hudson River Sloop Clearwater
112 Market Street
Poughkeepsie, NY 12601
(914) 454-7673

Air Toxics in New York State: A Citizens' Guide to the Right-To-Know Law & Air Toxic Data.
Jul. 1989, (1987 data), 90p.
Prepared with the American Lung Association of New York State, this well-presented citizens' guide and report covers TRI data use and limitations, state regulations, recommendations, health affects, and facility toxic air releases for each county.

Hazardous Neighbors? Living Next Door to Industry in Greenpoint-Williamsburg.
Jun. 1989, (1987 data).
Using TRI data and other information sources, the report profiles extremely hazardous chemicals on-site for 28 local companies.

Toxic Air Pollution from New York City Industry.
May 1990, (1988 data), 42p.
This review of New York City's industrial toxic air emissions provided a needed boost to a local citizens' campaign for cleaner air.

Toxic Tides; Your Right to Know.
Oct. 1989, (1987 data), 58p.
"Toxic Tides" is a very readable combination right to know handbook and report for the Hudson River Basin, containing well assembled environmental analysis from diverse sources.

NORTH CAROLINA

Clean Water Fund of North Carolina
138 E. Chestnut St.
Asheville, NC 28801
(704) 251-0518

North Carolina Environmental Defense Fund
128 East Hargett St.
Raleigh, NC 27601
(919) 821-7793

Preliminary Findings from a Study of The Upper French Broad River Basin.
Mar. 1991, (1987/88 data), 12p.
Data from TRI and other sources document serious toxic loadings into the Upper French Broad River, a potential drinking water supply for the Asheville-Buncombe county area.

Drawn With The Wind: Toxic Air Emissions Across North Carolina.
Feb. 1989, (1987 data), 130p.
TRI data revealed that nearly 100 million lbs. of air toxics were released annually in North Carolina, a state that had no toxic air pollution regulations at the time.

Toxic Air Emissions In North Carolina: An Update For [1988,1989].
Aug. 1989, (1987/88 data), 40p.; Oct. 1990, (1988/89 data), 70p.
These reports update "Drawn With The Wind," illustrating year-to-year reporting changes with useful examples.

OHIO

Ohio Citizen Action
691 North High St.
Columbus, OH 43215
(614) 224-4111

Toxics Unleashed: A Report on Toxic Chemical Releases in Montgomery County.
Sep. 1988, (1987 data), 37p; Also,
Reports for Franklin, Hamilton, Lucas, Cuyahoga and Summit Counties. *1989, (1987 data).*
Testing spurred by the Montgomery County report found toxins entering sewage treatment plants in volumes many times greater than anticipated.

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OHIO *(continued)*

BP America's Toxic Emissions And Health Problems In Lima: Is There A Link?
Nov. 1988, (1987 data), 25p.
This brief report looks at BP's toxic releases and statistically elevated local rates of lung disease and cancer deaths.

Toxic Chemical Emissions At The General Motors Lordstown Complex.
Nov. 1988, (1987 data), 8p.
This early TRI report discusses worker exposure to toxics and raises questions about the potential for emissions reductions.

Ohio Manufacturers' Toxic Chemical Releases, 1987.
Jun. 1989, (1987 data), 50p.
This report includes state figures and county-by-county totals.

Ohio Citizen Action
1406 W. 6th St.
Cleveland, OH 44113
(216) 861-5200

Still Holding Our Breath.
Apr. 1991, (1988/89 data), 154p.
This joint Citizen Action/Environmental Health Watch report presented a comprehensive look at TRI emissions in Cuyahoga County and helped advance a statewide right to know initiative campaign.

OREGON

Northwest Environmental Advocates
133 SW 2nd, Suite 302
Portland, OR 97204
(503) 295-0490

Input-Output Model For Toxic Releases To The Portland SMSA Environment.
Jun. 1990, (1987 data), 15p.
This draft technical paper uses a rough input-output model to predict the impact of economic growth on TRI releases.

Oregon State Public Interest Research Group
1536 SE 11th Avenue
Portland, OR 97214
(503) 231-4181

Toxic Hazards In Oregon.
Feb. 1989, (1987 data), 30p.
Oregon's reported toxic releases are quantified by release media and health effect, with a brief description of proposed toxics-use reduction legislation.

Every Breath You Take: Air Toxics In Oregon. *Jul. 1989, (1987 data), 22p.*
Toxics On The Rise: Oregon's Industrial Air Pollution. *Oct. 1989, (1988 data), 30p.*
Both reports document air toxics releases and the need for a successful Clean Air Act.

Toxics in Our Towns: The Continuing Need for Toxics Use Reduction.
Apr. 1990, (1988 data), 40p.
Toxic Truth and Consequences. *Mar. 1991, (1989 data), 42p.*
These are OSPIRG's second and third annual reports summarizing Oregon's TRI releases and toxics-use reduction legislation.

PENNSYLVANIA

Delaware Valley Toxics Coalition
125 S. 9th St., 7th Floor
Philadelphia, PA 19107
(215) 627-5300

Pennsylvania Toxic Chemical Release Inventory Report [1987,1988].
Sep. 1989, (1987 data), 160p.; Jan. 1991, (1987/88 data), 100+p.
These are detailed company and chemical discharge listings for Pennsylvania counties that incorporate an innovative chemical toxicity matrix throughout. The first report was published ten years after Philadelphia passed the nation's first community right to know law.

SOUTH CAROLINA

"Something In The Air"
P.O. Box 210591
Columbia, SC 29221-0591
(803) 781-4421

Something in the Air! (Air Toxics Across South Carolina).
Feb. 1991, (1988 data), 56p.
This citizens' report highlights South Carolina's total lack of air toxics regulations, despite ranking 10th in the nation for TRI releases to air.

South Carolina Wildlife Federation
PO Box 61159
Columbia, SC 29260-1159
(803) 782-8626

Toxic Releases In South Carolina, 1988.
Nov. 1990, (1987/88 data), 26p.
This paper examines 1987-88 reporting changes by the state's top ten dischargers, and includes a basic assessment of the limits to TRI reporting.

TENNESSEE

Greenpeace USA
1436 U St., NW
Washington, DC 20009
(202) 462-1177

Exporting Banned Pesticides: Fueling the Circle of Poison; Velsicol Chemical Corporation's Export of Chlordane and Heptachlor.
Aug. 1989, (1987/88 data), 80p.
TRI data supplements this well-researched report, which links the production and export of banned pesticides to a "circle of poison" including local toxic releases, superfund sites, food imports and human contamination. [Note: Velsicol is in Tennessee.]

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TEXAS

Clean Water Action/Fund
1320 18th St., NW
Washington, DC 20036
(202) 457-1286

The Houston Ship Channel And Galveston Bay: Texas Water Commission And EPA Turn Their Backs.
Jun 1989, (1987 data), 31p.
Right to know data show 150 million pounds of toxic chemicals entering the Houston Ship Channel and Galveston Bay - a problem long side stepped by the Texas Water Commission and EPA.

Toxic Oversight: How Millions of Pounds of Toxic Chemicals are being Dumped into the Houston Ship Channel and Galveston Bay Through Loopholes in the Permitting Process.
May 1990, (1987 data), 13p.
TRI data reveal that companies in the Galveston bay area routinely discharge massive amounts of pollutants that are not identified in their Clean Water Act discharge permits.

Texans United Education Fund
National Toxics Campaign Fund
3400 Montrose, Suite 225
Houston, TX 77006
(713) 529-8038

The Formosa Plastics Story: Report of Environmental Investigation.
Jul. 1990, (1987/88 data), 54p.
TRI data support analysis revealing Formosa Plastic's extensive record of environmental contamination.

VERMONT

Vermont Public Interest Research Group
43 State Street
Montpelier, VT 05602
(802) 223-5221

Toxics Released; An Inventory of Toxic Chemicals Released in Vermont.
May 1989, (1987 data), 50p.
Vermont companies released over two thousand tons of hazardous chemicals to the environment.

VIRGINIA

Environmental Action Foundation
1525 New Hampshire Ave., NW
Washington, DC 20036
(202) 745-4870

The Toxic Trail: A Citizens Guide to Reducing Toxic Pollution in Southwestern Virginia.
Nov. 1990, (1989 data), 64p.
This combination citizens' guide and TRI report covers the Interstate 81 corridor from Roanoke to Bristol, discussing TRI releases, related sources of information and strategies for citizen action.

Sierra Club/Appalachian Regional Office
1116-C West Street
Annapolis, MD 21401
(301) 268-7411

Toxic Air Pollution in Virginia.
Jan. 1990, (1988 data), 72p.
This thorough report examines state and federal air pollution regulations in the context of Virginia's 1987-88 air toxics data.

WASHINGTON

U.S. Public Interest Research Group
215 Pennsylvania Ave., SE
Washington, DC 20003
(202) 546-9707

The Dirty 8's: How The Major Contributors To The 97B Campaign Contribute to Washington's Toxic Burden.
Oct. 1988, (1987 data), 18p.
The top fourteen contributors opposing a Washington State Superfund initiative released nearly 200 million lbs. of toxic chemicals to the state's air, land and waterways.

WEST VIRGINIA

West Virginia Citizen Action Group
1324 Virginia St., East
Charleston, WV 25301, (304) 346-5891

Toxics in Our Midst: An Examination of Toxic Chemical Releases in West Virginia.
Jul. 1989, (1987 data), 34p.
This report represented the first extensive analysis of TRI data in West Virginia.

REGIONAL REPORTS (PUBLIC INTEREST GROUPS)

Greenpeace USA
1436 U St., NW
Washington, DC 20009
(202) 462-1177

Mortality And Toxics Along The Mississippi River.
Sep. 1988, (1987 data), 112p.
This Greenpeace report (prepared in conjunction with Public Data Access, Inc.) statistically explores elevated toxics levels and excess mortality along the Mississippi River.

Greenpeace USA Great Lakes
1017 W. Jackson Blvd
Chicago, IL 60607
(312) 666-3305

Greenpeace Mississippi River Report No. 2: Monsanto Company.
1988, (1987 data), 25p.
The report analyzes Monsanto's Mississippi River toxic discharges from plants in Iowa, Illinois and Missouri, with closer examination of Lasso, Ramrod and Machete pesticides and their production wastes.

We All Live Downstream: The Mississippi River and the National Toxics Crisis.
Dec. 1989, (1987 data), 186p.
This extensive study of toxics in the Mississippi River uses TRI to supplement other data sources.

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NATIONAL REPORTS (PUBLIC INTEREST GROUPS)

Citizens Fund
1300 Connecticut Ave., NW #401
Washington, DC 20036
(202) 857-5168

Poisons In Our Neighborhoods: Toxic Pollution In [state] [1987,1988,1989].
Oct. 1989, (1987 data); Jan. 1990, (1988 data); July 1991, (1989 data).
This annual series of 50 state-specific reports comprehensively presents each state's TRI releases by company, industry, county, zip code and toxicity.

Manufacturing Pollution: A Survey of the Nation's Toxic Polluters [1988,1989].
May 1990, (1988 data), 35p.; Jul. 1991, (1989 data), 40p.
These very useful annual reports present national TRI release totals for parent companies as well as for top ten facilities.

Poisons in Our Neighborhood: Toxic Pollution in the United States [1988,1989].
Jun. 1990, (1988 data), 262p or 24p summary; Jul. 1991, (1989 data), 250+p or 26p summary.
This national report presents, in a readable format, summary data for each state, chemical toxicity information and each state's top ten toxic polluters ranked by several criteria.

Clean Water Action/Fund
1320 18th St., NW
Washington, DC 20036
(202) 457-1286

Mercury Rising: Government Ignores The Threat Of Mercury From Municipal Waste Incinerators.
Sep. 1990, (1988 data), 52p.
This alarming report uses TRI data to help document widespread mercury contamination, and argues that the growing municipal waste incineration industry is substantially adding to the problem.

Inform, Inc.
381 Park Ave. South
New York, NY 10016
(212) 689-4040

Toxics in Our Air.
Mar. 1990, (1987 data), 8p.
This fact sheet identifies our air as the most commonly used toxic waste dump reported under TRI.

Trading Toxics Across State Lines.
May 1990, (1987 data), 35p.
This analysis documents patterns in interstate toxic waste shipments, including matrix-style tables on state imports and exports. [Note: Recycling transfers are not accounted for.]

Institute for Southern Studies
PO Box 531, Durham, NC 27702
(919) 688-8167

The 1991-92 Green Index: A State-By-State Guide to the Nation's Environmental Health.
Aug. 1991, (1988 data), 162p.
The "Green Index" uses TRI data as part of its state rankings on environmental issues.

National Environmental Law Center/
U.S. Public Interest Research Group
29 Temple Place
Boston, MA 02111
(617) 422-0880

Toxic Truth And Consequences: The Magnitude of and the Problems Resulting From America's Use of Toxic Chemicals.
Apr. 1991, (1988 data), 40p.
This report presents the case for public reporting on toxic chemical use and production; it cites hazards in transportation, on-site accidents, and workplace and consumer exposure, as well as the need for adequate information to advance toxics use reduction.

National Toxics Campaign Fund
1168 Commonwealth Avenue, 3rd Floor
Boston, MA 02134
(617) 232-0327

Present Dangers...Hidden Liabilities: A Profile of the Environmental Impact of the Union Carbide Corporation in the United States (1987-88).
Nov. 1990, (1987/88 data), 24p.
This study compares reductions in Union Carbide's TRI discharges and increases in the company's toxic waste discharges as reported under the Resource Conservation and Recovery Act.

National Wildlife Federation
1400 16th Street NW
Washington, DC 20036
(202) 797-6800

Danger Downwind: A Report on the Release of Billions of Pounds of Toxic Air Pollutants.
Mar. 1989, (1987 data), 120p.
Released concurrently with the Waxman report, this report presents state-by-state data clearly, stressing air pollution prevention.

The Toxic 500: The 500 Largest Releases of Toxic Chemicals in the United States, 1987.
Aug. 1989, (1987 data), 490p.
The report substantially completed EPA's first national report by listing the top 500 polluters reported under TRI and publishing health affects data for the chemicals released.

Phantom Reductions: Tracking Toxic Trends. *Aug. 1990, (1987/88 data), 140p.*
"Phantom Reductions" adds an important dimension to TRI analysis by systematically examining changes in 1987-88 reports for 29 major dischargers, finding both real pollution prevention and "phantom" or paper changes.

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Natural Resources Defense Council
1350 New York Ave., NW #300
Washington, DC 20005
(202) 783-7800

A Who's Who Of American Toxic Air Polluters; A Guide To More Than 1500 Factories In 46 States Emitting Cancer-Causing Chemicals.
Jun. 1989, (1987 data), 100p.
NRDC identifies the largest sources of 11 unregulated cancer causing chemicals released to air. The verified information includes useful chemical-by-chemical and state-by-state listings.

A Who's Who of American Ozone Depleters; A Guide To 3,014 Factories Emitting Three Ozone-Depleting Chemicals.
Jan. 1990, (1987/88 data), 235p.
NRDC identifies the largest emissions of ozone destroying chemicals reported under TRI, presenting verified information by chemical and by state, with an analysis of phase-out progress.

The Right To Know *More.* *May 1991, 120p.*
This report provides the analytical basis for broadening TRI, covering chemicals, facilities and types of data that are not reported under existing law.

OMB Watch
1731 Connecticut Ave., NW
Washington, DC 20009-1146
(202) 234-8494

Community Right To Know: A New Tool For Pollution Prevention.
Jan. 1989, (1987 data), 23p.
This report introduces TRI and highlights release trends for five key heavy metals discharged to air, land and water.

Working Group on Comm. Right To Know
Environmental Defense Fund
National Toxics Campaign Fund
Citizens Fund

The 'Recycling' Loophole in the Toxics-Release Inventory: Out of Site, Out of Mind.
Mar. 1991, (1987/88 data), 80p.
Released jointly by four organizations, this report identifies an important regulatory loophole in TRI reporting and documents with examples its impact on pollution prevention.

STATE REPORTS (GOVERNMENTAL)

This section gives special attention to the presence or absence of facility-specific release data and chemical-specific health hazards information.

ARKANSAS

Arkansas Dept of Poll. Control and Ecology
8001 National Drive
Little Rock, AR 72201
(501) 562-7444

1989 Arkansas Toxics Release Inventory.
1991, (1989 data), 30p.
This relatively simple report is generally informative on right to know, naming a few major polluters but containing minimal chemical-specific health hazards data.

CALIFORNIA

Environmental Affairs Agency
Off. of Haz. Materials Data Management
PO Box 2815, Sacramento, CA 95812
(916) 327-1848 or (916) 324-9924

1988 SARA 313 Chemical Releases.
Aug. 1990, (1987/88 data), 25p.
This report includes general release totals and simple 1987-88 comparisons, and is not sufficiently detailed to include facility or chemical specific data.

CONNECTICUT

Conn. State Emergency Response Comm.
Dept of Envir. Protection, Room 161
165 Capitol Ave., Hartford, CT 06106
(203) 566-4856

SARA Title III; Emergency Planning & Community Right To Know In Connecticut.
Dec. 1989, (1987 data), 53p.
This status report covers both emergency planning and routine releases, including an overview of TRI and general release data by chemical and by town. No chemical health effects data are included.

GEORGIA

Georgia Dept of Natural Resources
Environmental Protection Division
1152 Floyd Towers East, 205 Butler St., SE
Atlanta, GA 30334, (404) 656-6905

Toxic Release Inventory Report, [1988,1989].
Feb. 1990, (1988 data), 50p.; Mar. 1991, (1989 data), 54p.
These reports include facility specific data (by county), but lack chemical health effects information, and are limited to a control-oriented regulatory analysis of TRI releases.

ILLINOIS

Illinois Environmental Protection Agency
PO Box 19276
Springfield, IL 62794-9276
(217) 782-3637

[First, Second, Third] Annual Toxic Chemical Report.
Feb. 1989, (1987 data), 159p.; Feb. 1990, (1988 data), 109p.; May 1991, (1989 data), 129p.
These reports lack facility-specific information, but include some health hazards data and a brief section on data utilization.

INDIANA

Ind Dept of Envir Man, SARA Title III Prog
5500 West Bradbury Ave.
Indianapolis, IN 46241
(317) 243-5176

Indiana Toxic Release Inventory of 1987 Total Releases & Transfers.
Mar. 1990, (1987 data), 35p.
This under-interpreted report illustrates Indiana's top ten status among states nationwide for TRI releases, but contains no facility or chemical-specific data.

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KANSAS

Bureau of Environmental Health Services
Kansas Dept of Health and Environment
Mills Building, Ste 501, 109 SW 9th St.
Topeka, KS 66612, (913) 296-1690

Status Report: Emergency Planning and Community Right To Know Act.
Apr. 1990, (1987/88 data), 50p.
Kansas' status report covers the state's entire community right to know program, with limited TRI data presented for top facilities, by county and in general charts and graphs.

KENTUCKY

Department for Environmental Protection
18 Reilly Rd.
Frankfort, KY 40601
(502) 564-2150

Toxic Chemicals in Kentucky's Environment; Releases Reported Under SARA, Title III, Section 313.
Nov. 1988, (1987 data), 150p or 10p summary.
Kentucky's first state report used control-oriented analysis to assess the state's 225 million lbs. of TRI releases, concluding that "all of the releases are permitted."

1989 Toxic Chemical Release Inventory Data. *Dec. 1990, (1989 data).*
Kentucky publishes seven distinct TRI documents ranging from 10 page county totals to a 170 page statewide facility report. No chemical health effects data are apparent.

LOUISIANA

Louisiana Dept of Environmental Quality
P.O. Box 44066
Baton Rouge, LA 70804-4066
(504) 765-0648

Louisiana Toxic Release Inventory 1988. *Apr. 1990, (1988 data), 30p.*
This illustrative state report features graphics, state summary material and generally informative text. Facility and chemical specific data were included in a report released concurrently.

A Review of Selected Facilities in Louisiana. *Apr. 1990, (1988 data), 150p.*
This review compliments a more general report, documenting releases and industrial activities of significant dischargers, and including useful chemical fact sheets.

Corporate Response to DEQ's Request for Toxic Waste Reduction Plans, 1989.
Nov. 1990, (1988 data), 80p.
This most innovative of state reports provides discharge data for top polluters and evaluates each facility's waste reduction goals.

MICHIGAN

Michigan Dept. of Natural Resources
Environmental Response/SARA Title III
P.O. Box 30028
Lansing MI 48909, (517) 373-8481

Toxic Chemical Release Inventory: Summary Report for Michigan, 1988 Data
Sept. 1990, (1988 data), 60p.
Michigan published release data by county, city, facility and chemical, without any analysis

MINNESOTA

Dept of Pub Safety, Emergency Resp Comm
290 Bigelow Bldg, 450 North Syndicate St.
St. Paul, MN 55104
(612) 643-3000

[1988,1989] Toxic Chemical Release Inventory.
Nov. 1989, (1988 data), 122p.; Sep. 1990, (1989 data), 130p.
These relatively complete state reports are generally informative and include company specific emissions data, but do not contain systematic chemical health effects information for TRI chemicals.

NEW JERSEY

NJ Dept of Environmental Protection
Division of Environmental Quality
401 E. State St., CN405, Trenton, NJ 08625
(609) 292-6714

Community Right-To-Know Annual Report [1987,1988].
Mar. 1989, (1987 data), 61p.; Sep. 1990, (1988 data), 64p.
New Jersey's reports feature comprehensive text and data summaries, quick-reference chemical information, and limited data on specific emissions sources. A form is included for more information.

NEW YORK

NY State Dept of Envir Cons,Div of Water
50 Wolf Road
Albany, NY 12233-3510
(518) 457-4107

New York State [1987,1988,1989] Toxic Release Inventory (TRI) Review.
Apr. 1989, (1987 data), 40p; Dec. 1989, (1988 data), 38p; Nov. 1990, (1989 data), 50p.
These reports name top dischargers, but lack chemical toxicity data and are limited by a pollution control-oriented focus on compliance with standards and regulatory limits.

UTAH

Utah Dept of Health, Div of Envir Health
288 North 1460 West
Salt Lake City, UT 84116
(801) 538-6338

Utah Toxic Release Inventory: Summary Report [1988,1989].
Mar. 1990, (1988 data), 45p.; Feb. 1991, (1989 data), 40p.
These reports list release totals, name companies and include primitive year-to-year comparisons, but lack health hazards data.

VIRGINIA

Virginia Emergency Response Council
Monroe Building, 18th Floor
101 N. 14th St., Richmond, VA 23219
(804) 225-2513

Virginia SARA Title III Section 313 Release Report.
Nov. 1989, (1987/88 data), 160p.
Data are reported by discharge route, chemical, facility, industrial classification and city with a 1987-88 summary comparison.

REGIONAL REPORTS (GOVERNMENTAL)

Congressman Guy Molinari [Succeeded by Congresswoman Susan Molinari]
315 Cannon House Office Bldg.
Washington, DC 20515-3214
(202) 225-3371

Toxic Chemical Inventory; Toxic Chemical Presence And Releases To The Environment In An Area Of Northeastern New Jersey.
Apr. 1989, (1987 data), 83p.
This is a very comprehensive report (for its geographic area) - one of the more readable and thorough available.

Senator Frank Lautenberg/Congressman James Florio
717 Hart Senate Office Bldg
Washington, DC 20510
(202) 224-4744

Air Toxic Report; New York - New Jersey - Connecticut Metro Area.
Apr. 1989, (1987 data), 20p.
This report details air emissions in the tri-state metro area.

NATIONAL REPORTS (GOVERNMENTAL)

Subcomm on Health and the Environment
Committee on Energy and Commerce
U.S. House of Representatives
Henry A. Waxman, Chairman

The National Toxic Release Inventory; Preliminary Air Toxic Data.
Mar. 1989, (1987 data), 80p.
Preliminary TRI data released by Congressman Waxman during Clean Air Act reauthorization debates on March 22, 1989, helped to illustrate the scope of legal toxic dumping into the air.

U.S. Environmental Protection Agency
Pesticides and Toxic Substances (TS-799)
401 M St., SW
Washington, DC 20540

The Toxics-Release Inventory; A National Perspective, 1987.
Jun. 1989, (1987 data), 340p.
EPA's first national report contains extensive statistical analyses, numerous revealing maps, charts and graphs and other information. The report entirely omits facility specific discharge data and chemical-specific health hazards information.

U.S. Environmental Protection Agency
Pesticides and Toxic Substances (TS-799)
401 M St., SW
Washington, DC 20540

Toxics in the Community: National and Local Perspectives.
Sep. 1990, (1987/88 data), 425p.
EPA's second annual report documents the nation's TRI releases with extensive charts, tables, maps and figures. This report includes facility-specific discharge data for top polluters and a matrix of environmental and health hazards associated with TRI chemicals.

U.S. General Accounting Office
P.O. Box 6015
Gaithersburg, MD 20877
(202) 275-6241

EPA's Toxic Release Inventory Is Useful but Can Be Improved.
Jun. 1991, 89p.
The law required the U.S. General Accounting Office to review the use and accessibility of TRI data, and to make recommendations to Congress [EPCRA, Section 313 (k)]. Major recommendations: include more emissions sources and chemicals, increase compliance, and verify more emissions data.

Breakdown of TRI Reports

Facility Focus of Reports

	Percent of Reports	
Sources Covered	State	Public Interest
Top Emitters	35%	87%
All Reporters	45%	37%
Industrial Sector	50%	19%
Single Facility	0%	6%

Geographic Focus of Reports

	Percent of Reports	
Scope	State	Public Interest
National	0%	12%
Regional	0%	6%
State	100%	52%
County	70%	46%
City/Town	20%	17%
Neighborhood	0%	0%

Release Media Focus of Reports

	Percent of Reports	
Release Media	State	Public Interest
Air	90%	85%
Water	90%	54%
Land	85%	37%

Researchers at the University of North Carolina recently conducted an EPA supported study that included this analysis of TRI reports. The study did not include reports published in 1991, and thus used a slightly different set of reports from those listed above.

These tables are adapted from: Lynn, F., Kartez, J., Connelly, C., Hunter T. 1991 *The Toxic Release Inventory: Access, Use and Impact*. Chapel Hill, N.C.: UNC Institute for Environmental Studies. For information on the UNC report feel free to call (919) 966-2358.

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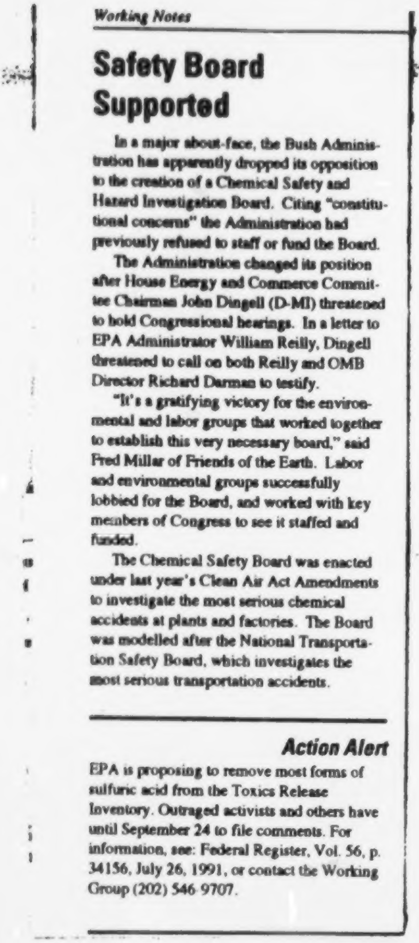

Working Notes

Safety Board Supported

In a major about-face, the Bush Administration has apparently dropped its opposition to the creation of a Chemical Safety and Hazard Investigation Board. Citing "constitutional concerns" the Administration had previously refused to staff or fund the Board.

The Administration changed its position after House Energy and Commerce Committee Chairman John Dingell (D-MI) threatened to hold Congressional hearings. In a letter to EPA Administrator William Reilly, Dingell threatened to call on both Reilly and OMB Director Richard Darman to testify.

"It's a gratifying victory for the environmental and labor groups that worked together to establish this very necessary board," said Fred Millar of Friends of the Earth. Labor and environmental groups successfully lobbied for the Board, and worked with key members of Congress to see it staffed and funded.

The Chemical Safety Board was enacted under last year's Clean Air Act Amendments to investigate the most serious chemical accidents at plants and factories. The Board was modelled after the National Transportation Safety Board, which investigates the most serious transportation accidents.

Action Alert

EPA is proposing to remove most forms of sulfuric acid from the Toxics Release Inventory. Outraged activists and others have until September 24 to file comments. For information, see: Federal Register, Vol. 56, p. 34156, July 26, 1991, or contact the Working Group (202) 546-9707.

WORKING NOTES
ON COMMUNITY RIGHT-TO-KNOW
September-October 1991
A WORKING PAPER ON OUR RIGHT-TO-KNOW ABOUT TOXIC POLLUTION

Making the Difference, Part II: More Uses of Right-to-Know in the Fight Against Toxics

Nita Settina, Center for Policy Alternatives
Paul Orum, Working Group on Community Right-to-Know

This is Part II of Making the Difference, *a report examining citizen use of the Emergency Planning and Community Right-to-Know Act of 1986. Ten success stories illustrate how citizens are making the difference in the fight against toxics in their communities. Copies of the full report are available for $5.00. Part I was published in 1990. For more information, contact Nita Settina: 202/387-6030, or Paul Orum: 202/546-9707.*

Forward

The residents of a Brooklyn, New York neighborhood were totally frustrated. Their 12-year campaign to convince officials to control the fumes from a local photographic plant was going nowhere. Residents blamed the fumes for their recurring headaches and nausea. Their salvation was the toxic release information they were finally able to obtain using federal right-to-know powers. When this information demonstrated that the plant was the city's worst toxic air polluter, the ensuing outcry led to immediate reductions in the plant's emissions.

This is just one of many success stories described here illustrating how communities across the nation are using their right-to-know in a front-line defense against toxic pollution. Public access to industrial data on toxic chemical storage and emissions is leading to greater public awareness of local toxic threats and providing factual credibility to citizen groups combatting toxics.

This success vindicates Rep. Gerry Sikorski (D-MN) for his 1986 sponsorship, over strong industry and Reagan Administration opposition, of community right-to-know. "They said it was radical," recalls Rep Sikorski. "They said it would cost money. That it was unworkable, unfair, un-American."

Since then, much has changed. The Emergency Planning and Community Right-to-Know Act (EPCRA), enacted in 1986, is widely recognized for opening the door to a wealth of environmental information. "Now" says Rep. Sikorski, "the EPA touts it. Wall Street embraces it. And big companies report they are saving millions of dollars as they cut chemical use."

As important as these successes are, however, they also show that right-to-know cannot do the job alone. Under-reporting of emissions is widespread, accident prevention lags and chemical use and production data are absent. In response, environmental organizations across the country are launching a grassroots "right-to-know *more*" campaign to build on the success of right-to-know efforts.

(Continued on page 2)

1. **Calhoun County, Texas:**
   Hunger Strike Puts Polluter in the Spotlight
   Citizen activist wins new recognition of pollution concerns.
2. **Northfield, Minnesota:**
   Labor Union and Community Groups Win Reduction Pledge
   Labor union includes community concerns in contract negotiations to reduce worker and community exposure to methylene chloride.
3. **Contra Costa County, California:**
   Citizens Seek Hazard Information
   State commission affirms local committees' right to chemical hazard information for accident prevention.
4. **Boulder, Colorado:**
   Good Neighbor Pledge Starts Reduction Process
   Citizens' concerns prompt Syntex Chemicals to sign a "good neighbor" pledge to reduce toxic air emissions.
5. **New York City, New York:**
   Citizens Push for Clean Air
   Toxics release data help residents of a New York City neighborhood win a twelve year fight for cleaner air.
6. **Cuyahoga County, Ohio:**
   Companies Change Chemicals to Cut Hazards
   Effective local emergency planning prompts facilities to re-examine chemical hazards for greater safety.
7. **New York State and Nationwide:**
   Civil Suits Enforce Right-To-Know: Company Realizes Pollution Prevention Savings
   Civil suit provisions empower citizens to enforce the law and win pollution prevention plans from industry.
8. **Cloverleaf, Texas:**
   Plume Mapping Reveals Ammonia Danger
   Concern about the off-site consequences of chemical accidents is changing the relationship between communities and prospective industrial neighbors.
9. **Arcata, California:**
   California Laws Extend Right-To-Know
   Activists combine two progressive state laws with federal right-to-know to combat toxic exposure in the community.
10. **Massachusetts:**
    Ozone Advocates Score Victory
    Activists win pledge from Raytheon to replace ozone-destroying chemicals with safer substitutes.

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The Successes of Right-to-Know

Ten right-to-know success stories demonstrate the wide range of benefits to communities and citizens — strengthening enforcement of toxic pollution laws, reducing toxic threats, pressuring businesses to reduce hazardous chemical use and establishing citizen groups as permanent participants in corporate policy-making.

- In **Northfield, Minnesota**, toxic release inventory (TRI) data helped to bring community and labor leaders together to fight for a company's reduction in toxic emissions. Union officials, anxious about workers' exposure to methylene chloride, had been campaigning for years to convince Sheldahl Inc. to reduce worker exposure. However, it was not until TRI data became available that nearby residents became aware that they too were at risk. Subsequently, union officials moved quickly to incorporate community concerns into contract negotiations with Sheldahl. The company agreed to phase-out use of the chemical by the year 2000.
- Public understanding of the potential off-site consequences of chemical accidents is fundamentally changing relationships between communities and their industrial neighbors. Residents of **Cloverleaf, Texas** organized quickly against a large ammonia storage and distribution facility. More than 100,000 gallons of ammonia would have been placed within a mile of 500 homes, characterized in the permit application as neighborhoods containing "very low quality housing" and therefore "appropriate" (read "expendable") for the facility. When Texas authorities rejected the permit application (a first for the state Air Board), residents ensured they were in control of their community's safety.
- TRI data has been used by **New York's Atlantic States Legal Foundation** to win a variety of toxic reduction victories. The process involves identifying companies that fail to report under right-to-know, filing a civil suit and then negotiating a toxic use reduction plan as part of the settlement. Some companies are learning that they can benefit financially by reducing their use of toxic chemicals, thereby avoiding costly environmental regulations and lawsuits.
- Right-to-know has enabled local activists to tackle global environmental issues such as ozone depletion. Using TRI data, activists in **Massachusetts** were able to obtain a pledge from the state's largest industrial emitter of ozone destroying chemicals, Raytheon. The company promised to phase-out use of ozone-destroying chemicals by 1992 and pledged to use safer alternatives that don't pose cancer risks to workers. TRI data showed that the company reported emitting 3.6 million pounds of CFC-113 and methyl chloroform over a two-year period from 1987 to 1988.

These and other examples illustrate how increased citizen knowledge of polluters plays a vital role in increasing corporate accountability. No longer can industry and government routinely deny that citizens' concerns about toxic pollution are legitimate. In addition, right-to-know information has arguably been a driving force behind the passage of preventive-oriented legislation in many states to reduce or eliminate the use of toxic chemicals.

The Right-To-Know *More*

Despite clear successes, the implementation of right-to-know has brought to light shortcomings in the law.

Many toxic emissions continue to go unreported. Hundreds of chemicals that cause cancer and birth defects are not on the right-to-know reporting list. Thousands of non-manufacturing facilities — including federal facilities — are not required to report their emissions.

Common routes of chemical exposure are not revealed by current right-to-know provisions. Facilities report reduced emissions even as workplace and consumer exposure continue unabated. Important data on chemical use and production — data that are necessary to measure pollution prevention progress and to ensure that companies are not shifting risks between workers, consumers and the environment — are excluded from the toxics release inventory.

Moreover, with rare exceptions, chemical accident prevention remains stalled due to lack of funding, public involvement and, in some cases, political pressure. All too often, Local Emergency Planning Committees lie dormant, unable or unwilling to demand that local facilities share information on their potential for toxic spills, gas clouds or explosions. Without this information, public pressure for emergency planning and prevention fails to develop. More than six years after the Bhopal tragedy focussed world-wide attention on chemical hazards, little is known about America's potential Bhopals.

For these reasons, activists across the country are launching a campaign for the right-to-know *more* — more about chemical release and exposure, more about chemical production and use, and more about the off-site consequences of chemical accidents.

Case Study #1

Hunger Strike Puts Polluter in the Spotlight

Calhoun County, Texas

Residents of Calhoun County on Texas' Gulf Coast were shocked to learn that their county ranked first in the nation for toxic chemical disposal to the land in a 1989 Environmental Protection Agency (EPA) report using newly acquired toxics release inventory (TRI) data. One resident in particular was outraged and prepared to change that statistic — Diane Wilson — fisherman, mother, and now activist.

Host to industrial giants like Alcoa, Union Carbide, BP Chemicals and DuPont, Calhoun County public officials have promoted industrial development with tax incentives despite the companies' often glaringly poor environmental records. Diane Wilson credits the release of TRI data with opening residents' eyes to the environmental and public health impacts of their chemical industry neighbors:

> "Industry in Calhoun County has been a sacred cow. They had never been touched or questioned...no one in the community had ever known the level of our toxic exposure. I was horrified. The right-to-know law has provided the public with information we need to protect ourselves. It has been the only true 'light in the wilderness'."

Wilson worked with Texans United, a statewide advocacy group, to invite community members to a public hearing on what it meant to be the nation's number one toxic chemical dumping ground. Turned away from City Hall by nervous public officials, the meeting was held at a local school house. An impressive turnout of 80 people attended, listening to educational presentations by a toxicologist, a geophysicist, an environmental lawyer and an experienced activist. None of the invited politicians attended.

Frustrated and concerned, 70 community members joined Diane Wilson to form a citizens' group, Calhoun County Resource Watch (CCRW). With the help of an environmental lawyer, Jim Blackburn, the group took on its first project: petitioning the state Air Board to hold a public hearing on a permit request by Formosa Plastics Corporation. The company sought to increase toxic air emissions by 3,000 tons, as part of a $1 billion dollar expansion project.

The threat of public hearings caused local politicians and industry leaders to harshly criticize the citizens' group for creating unnecessary trouble and threatening the county's economic development. Formosa Plastics immediately called a private meeting with CCRW in an attempt to avoid the hearing.

Initially bolstered by their private meeting with Formosa Plastics, the citizens became disillusioned as they learned more about the company's disgraceful record of pollution violations. An investigative report by Texans United documented serious toxic pollution at Formosa Plastics plants in Delaware, Louisiana, Taiwan and Texas, and helped convince CCRW members that their demands would not be met.

Formosa applied for further air pollution permit increases and began construction on its new plant expansion. In a declaration of war, Diane Wilson threatened to go on a hunger strike if the EPA did not first require an Environmental Impact Statement (EIS) from Formosa. The community, press, and local politicians were incredulous.

The EPA issued a 'Finding of No Significant Impact' - meaning that no EIS would be required - and the project was allowed to continue. Diane Wilson's hunger strike began.

Stationed alone on a shrimp boat at a dock on the Lavaca Bay, Diane began her hunger strike on Easter Sunday 1990. For the next two weeks, the eyes of Calhoun County would be on her, as Formosa officials tried to convince her to end the strike.

> *"The Right-to-Know law has provided the public with information we need to protect ourselves. It has been the only true 'light in the wilderness'."*
>
> — **Diane Wilson**
> community activist, Calhoun County, Texas,
> the nation's leading county for on-land toxic discharges.

After 10 days, Diane Wilson threatened to move her hunger strike to the doorstep of the EPA headquarters in Dallas. The citizens also formally petitioned EPA to require the EIS from Formosa. With the impending threat of the hunger strike moving to their front doorstep, and increased public pressure, the EPA announced that their finding of 'No Significant Impact' had been "premature" and declared that no decision had been made.

It was not until January 1991, however, that EPA formally announced that it would require an EIS from Formosa. Meanwhile, work on the plant continued.

Calhoun County Resource Watch members have joined Texans United in a suit filed in Federal District Court to halt further construction of the plastics plant until the EIS is completed by Formosa. Although the suit was filed on May 15, 1991, the court has not set a date for a hearing, even as construction involving $300 million and 4,000 workers continues.

Nonetheless, Diane Wilson refers to the EPA's decision to require an EIS as the "turning of the tide." Formosa Plastics has since suffered record multi-million dollar fines for environmental violations and has received greatly increased public scrutiny. "It wasn't just the [toxics release] information," says Diane; "people realized they had rights."

Contacts:
Diane Wilson, Calhoun County Resource Watch, (512) 785-2321 (days); (512) 785-2364 (eves.)
Jim Blackburn, Blackburn and Carter, P.C., (713) 524-1012

Case Study #2

Labor Union and Community Groups Win Reduction Pledge

Northfield, Minnesota

Working together in May 1990, community activists from Northfield, Minnesota and the Amalgamated Clothing and Textile Workers Union (ACTWU) successfully negotiated with Sheldahl Incorporated to reduce, and ultimately eliminate, air emissions of the probable carcinogen, methylene chloride.

The release of a Natural Resources Defense Council report, which named Sheldahl as the nation's 45th largest industrial emitter of airborne carcinogens, led to the formation of two citizens' groups: the Northfield Air Toxics Study Group (ATSG) and Clean Air in Northfield (CAN). The increased citizen concern and media scrutiny regarding Sheldahl's toxic releases coincided with tense contract negotiations between Sheldahl and the ACTWU.

According to Richard Metcalf, negotiator for ACTWU Local 1481, the union had been trying to reduce worker exposure to methylene chloride for more than eight years and was now worried that community concerns over the air toxics might lead to calls to shut the plant down. The union sought to preempt further confrontations with the community by including environmental issues in the new contract, and insisting that local citizens groups be present during pollution negotiations with Sheldahl.

Contract negotiations between Sheldahl and the ACTWU resulted in an agreement for a 64 percent use reduction by 1992, and a 90 percent emissions reduction by 1993. The agreement also targets the development of a non-toxic alternative manufacturing process as the number one priority of Sheldahl's capital improvements budget over the next two years.

The contract negotiations provided a focal point for calls to reduce emissions and use of toxics. According to Richard Metcalf, "Before the contract, many people didn't have confidence that Sheldahl would reduce its use of toxics." Eric Frumin, ACTWU national health and safety director added, "The new contract puts the union in position to enforce use reduction. The union acts as the Environmental Protection Agency."

Under the terms of the contract, Sheldahl will phase out use of methylene chloride and entirely eliminate the chemical by the year 2000. The Minnesota Pollution Control Agency later supported the reduction agreement by incorporating a modified reduction schedule into Sheldahl's five year air permit.

In the short term, Sheldahl is reducing its methylene chloride releases by turning to flammable substitutes that are being incinerated to reduce emissions. The company is also developing a water based substitute that it hopes will serve as a long term non-toxic solution to protect both workers and the community.

Contacts:
Richard Metcalf, Amalgamated Clothing and Textile Workers Union, (612) 379-7102
Frank Wolf, Clean Air in Northfield, (507) 645-4633

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Case Study #3

Citizens Seek Hazard Information

Contra Costa County, California

Citizens in California's San Francisco Bay Area are winning a major victory on access to chemical hazard information. After years of resistance, county and state agencies have conceded that the public does have a right-to-know about the potential off-site consequences of chemical accidents.

At issue are companies' own hazard assessments describing the potential off-site impacts of chemical fires, explosions and gas clouds. Industry has long sought to shield these documents from public scrutiny.

At the center of the controversy is Chevron's Richmond oil refinery and fertilizer plant. The facility stores up to 3.8 million pounds of ammonia on-site, including 1.8 million pounds in a single storage sphere. A sudden release of ammonia can form a dense, lethal, ground-hugging plume that drifts for miles downwind.

A series of more than 70 fires at the Chevron facility in the mid-1980s heightened the concerns of plant neighbors about the possibility of a sudden release. The plant's proximity to the Hayward earthquake fault, less than three miles away, also contributed to the neighbor's concerns.

Citizens' groups, including Citizens for a Better Environment (CBE) and the West County Toxics Coalition, have for years pressed the Contra Costa County Health Department to make public the documents used to review Chevron's state-mandated accident prevention plan. The citizens met with the Health Department, generated press coverage, conducted letter writing campaigns and turned out over 100 local residents at a community meeting in their bid to obtain the off-site consequence analysis, which includes maps of chemical plumes that could engulf neighborhoods.

It was the Local Emergency Planning Committee (LEPC), however, that first supported the citizens' right-to-know. The committee used its authority under section 303(d)(3) of the federal right-to-know law to request Chevron's internal hazard studies, off-site consequence analyses and safety audits. Once obtained by the LEPC, the documents will become accessible to the public through the Freedom of Information Act.

The LEPC's action drew a sharp response from California's Chemical Emergency Planning and Response Commission (CEPRC), which moved to block the request for Chevron documents. The state Commission backed down, however, after concerns were raised about the wisdom of preventing the LEPC from addressing chemical hazards, and about the potential for CEPRC liability. The Commission subsequently issued a resolution affirming the right of the LEPC to request hazard assessment documents for emergency planning purposes.

The flap over companies' hazard assessment information escalated with passage of California state legislation that guarantees the public's right-to-know about the risks of chemical accidents. The legislation, which awaits the signature or veto of Governor Wilson by October 13, further specifically affirms the public's right to participate in hazardous materials accident prevention.

Nonetheless, the law covers only the 'most likely' hazards, and CBE's Michael Belliveau questions whether all accident hazards will be revealed. "We don't want to argue over how likely a potentially catastrophic release is," said Belliveau. "We want to know what the company is doing to prevent a chemical disaster from happening in the first place."

Today, more than six years after the Bhopal, India, gas cloud swept through a sleeping neighborhood, citizens are still largely in the dark about the potential consequences of chemical accidents. But, for the first time, a state agency has officially recognized the an LEPC can ask for the information it needs for emergency planning. And, as the Chevron case demonstrates, citizens' groups can help prompt responsive LEPCs to obtain facility hazard assessments - an essential first step to risk reduction and accident prevention.

Contacts:
Mike Belliveau/Nora Chorover, Citizens for a Better Environment, (415) 243-8373; Henry Clark, West County Toxics Coalition, (415) 232-3427

Case Study #4

Good Neighbor Pledge Starts Reduction Process

Boulder, Colorado

When toxics release inventory (TRI) data hit the press in Colorado, Syntex Chemicals Corporation got a public relations black eye. The pharmaceutical manufacturer proved to be the largest source of toxic air emissions in the Boulder area.

Boulder County has consistently ranked among the top counties in the state of Colorado for toxic air emissions. Many residents of Boulder, which prides itself on environmental sensitivity, were shocked at the extent of the area's toxic air pollution.

The extensive publicity piqued the interest of local citizens and elected officials, who called for a public meeting with Syntex in August, 1990. The company proved willing, however, to answer questions from concerned citizens at the public meeting. Syntex also hired a public relations firm to improve its public image.

Discussions evolved slowly until 1991 when Syntex indicated willingness to pledge as a "good neighbor" to reduce emissions. After a lengthy process that also involved Syntex' corporate headquarters in Palo Alto, California, the company signed a good neighbor pledge to cut its 1989 reported toxic air emissions 50% by 1994. Syntex further pledged to set up a citizen advisory panel, both to serve as a conduit to improve the company's communication with the public and to help hold the company accountable.

While a good first step, several important points remain unresolved, including the composition of the citizen advisory panel and how the panel will verify the plant's reductions in toxic emissions.

Activists are concerned that Syntex will simply shift wastes into its on-site hazardous waste incinerator for burning. Syntex operates the only Colorado incinerator to make a recent EPA deadline to allow continued burning of toxic waste.

"The key thing is going to be the definition of what constitutes waste reduction," says Colorado Citizen Action's Larry Bulling. Key also is the degree to which the citizen advisory panel will be empowered to verify Syntex' reduction claims.

Without verification powers, the Syntex' good neighbor pledge does not differ substantially from the Environmental Protection Agency's "33/50 Project," under which companies are pledging to voluntarily reduce emissions 33% by 1992 and 50% by 1995. "The problem with the 33/50 project is that there's no place for citizens to be involved in the process for verification," said Bulling. "It's simply us trusting industry and EPA to say that they've [reduced emissions]."

Citizen Action and a recently formed organization of neighborhood residents, BREATHE (Boulder Residents for the Elimination of Airborne Toxins and Hazardous Emissions) are pressing Syntex to provide the advisory panel with resources to hire outside consultants to verify the

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company's emissions reports. Access to technical assistance is critical if citizens are to verify emissions reductions.

Legislation before Congress would, if passed, contribute substantially to public understanding of Syntex' and other companies options for reducing toxic pollution. The Community Right-to-Know More Act of 1991 (H.R. 2880, introduced by Congressman Sikorski, D-MN) requires public reporting on the chemicals used in each specific production process. Use data provides a better basis for determining what a 50% reduction in emissions actually means. Most importantly, it provides the information necessary to begin to look at reducing the use of toxic materials and substituting safer alternatives.

At present, however, the public remains largely in the dark about the alternatives available to companies to truly reduce the use of toxic chemicals. Nonetheless, Bulling is optimistic about the process begun by the Syntex agreement: "[Syntex] is probably the most complex source of toxic emissions in the state," he said. "If a pharmaceutical company like Syntex can make this commitment and actually follow through on its pledge, then why can't a more traditional industrial source like Coors do the same thing?"

Contact:
Larry Bulling, Colorado Citizen Action, (303) 839-5232

Case Study #5

Citizens Push for Clean Air

New York City, New York

Boerum Hill, a close-knit community in Brooklyn, New York had a toxics problem it could smell. For more than a decade, residents complained to city officials about headaches and nausea, which they attributed to a noxious nail polish-like odor emanating from the Ulano Corporation. Ulano, a graphic art supplies manufacturer, was releasing the toxic chemical toluene into the air.

A small group of local citizens — the Boerum Hill-South Brooklyn Clean Air Committee — staged demonstrations with gas masks and sent state representatives odor report cards tracking the frequency of the noxious smell. Very little happened beyond bureaucratic foot-dragging, however, until the 1986 Emergency Planning and Community Right to Know Act (EPCRA) quantified the problem and gave citizens a tool for action.

The Consumer Policy Institute (CPI), a division of Consumers Union, used TRI data to prepare a May 1990 report identifying Ulano as the top industrial toxic air polluter in New York City. The report showed that Ulano was responsible for 17% of the city's toxic air pollution as reported in the 1988 toxics release inventory (TRI) data. The news came as no surprise to local residents.

CPI's report, which was co-released at a press conference with the Boerum Hill Committee, generated extensive media attention. On the same day, the New York State Department of Environmental Conservation (DEC) called a local television station to announce that Ulano must begin using a new incinerator to reduce emissions by July 18, 1990, or face stiff fines. Ironically, a dispute between state and federal regulators about the adequacy of the incinerator had kept the device out of operation for more than a year.

The DEC claims that the incinerator reduces toluene emissions by 95%. However, as at most manufacturing plants around the country, little is publicly known about preventive non-toxic alternatives that could avoid incineration altogether.

Nonetheless, residents feel that they have won a significant victory. Jane Califf, the President of the Boerum Hill Committee said of their success, "In our minds our biggest strength was our 12 years of struggle and perseverance. The final push was CPI's report and the media coverage it received. It wasn't just a local issue anymore."

The local citizen experience with the Ulano facility illustrates the slow pace and general ineffectiveness of the original Clean Air Act of 1970. The law had failed to address community concerns about air toxics.

While the Clean Air Act amendments of 1990 promise to improve the situation by regulating more chemicals, the process involves long time frames and uncertain results. Grass roots activism will continue to be necessary to breathe life into programs to better protect communities from toxic air pollution.

Contacts:
Eileen Nic, Consumer Policy Institute, (914) 378-2455 or (212) 663-6378
Jane Califf, Boerum Hill-South Brooklyn Clean Air Cmte, (718) 596-0842

Case Study #6

Companies Change Chemicals to Cut Hazards

Cuyahoga County, Ohio

Can an effective Local Emergency Planning Committee (LEPC) spur companies to switch to less dangerous chemicals? Early returns from Cuyahoga County, Ohio indicate that the answer may be yes.

As part of its emergency planning process, the Cuyahoga County LEPC conducted a hazard analysis of close to 300 facilities that handle extremely hazardous substances. For each facility, the LEPC mapped a vulnerability zone to determine the areas and populations that could be affected by a worst case chemical release.

The vulnerability zone is portrayed as a circle on a map of the surrounding community and is one of the most graphic demonstrations of the potential hazards to plant neighbors — including schools, nursing homes and residential neighborhoods. The LEPC placed its emergency plan, with vulnerability zones, in public libraries.

"Facility managers know that this information is available to the public, so it is not surprising to find that it may influence decisions about the use or storage of extremely hazardous substances," said LEPC information coordinator Michael Kalstrom. "While our emphasis has been on upgrading emergency planning, these changes are a positive by-product of the planning process," he said.

Concern for employee and public safety helped motivate the Cleveland area's largest sewage treatment plant to eliminate a 55-ton railroad tank car of chlorine from its operations. Sudden release of the chlorine contained in a 55-ton tank car (110,000 pounds) can send a hazardous chemical plume more than 10 miles downwind.

Chlorine gas is commonly used in high volumes as a disinfectant, but exposure can severely burn the eyes, skin and throat, causing permanent damage or even death. By switching to sodium hypochlorite, a much less volatile liquid, the risks posed by a sudden release are greatly diminished.

According to the 1990 Annual Report of the Northeast Ohio Regional Sewer District:

> "A safer, more economical disinfection system is now used at [the District's largest sewage plant]. The change from chlorine gas to liquid sodium hypochlorite, a strong bleach, was made because it is safer."

Other treatment plants in the Sewer District are also slated to begin using the safer chemical.

A smaller facility, the Lakewood Wastewater Treatment Plant also

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eliminated its use of three one-ton cylinders of chlorine. According to plant manager Bill Crute, "Using the chlorine gas was more dangerous than switching over and using sodium hypochlorite. The switch was based strictly on safety factors."

Crute credits right-to-know with increasing awareness and spurring re-examination of chemical hazards that had been routinely accepted for years. The change illustrates the potential preventive impact of the emergency planning process, both within and outside a facility.

"Facilities change their processes for many reasons," cautions Stuart Greenberg of the Environmental Health Watch, an advocacy group and a member of the LEPC. "But a company is more likely to make changes if its chemical hazards have been analyzed and made public."

Contact:
Stuart Greenberg, Environmental Health Watch, (216) 961-4646.

Case Study #7

Civil Suits Enforce Right-to-Know: Company Realizes Pollution Prevention Savings

New York State and Nationwide

The Atlantic States Legal Foundation, a national environmental organization, became the first plaintiff to successfully use citizen suit provisions of the Emergency Planning and Community Right-to-Know Act (EPCRA, Section 326) against companies that fail to report under the law. One of the most impressive outcomes of these settlements has been the negotiation of pollution prevention plans, which not only benefit the environment, but in this case, a defendant as well.

In one of their first victories, Atlantic States reached a $68,000 settlement agreement with Murray Sandblast & Paint of Buffalo, New York. Entered in Federal Court in Buffalo on December 10, 1990, the innovative agreement provided a $58,000 credit for Murray if the company implemented a pollution prevention and toxics use reduction program. The balance of the settlement, $10,000, was paid to the U.S. Treasury, Erie County Local Emergency Planning Committee and Great Lakes United, which used the funds to conduct a community workshop.

"A very unusual feature of our settlement negotiations involved pollution prevention and toxics use reduction plans'" said Samuel Sage, president of Atlantic States. "Since our primary goal is reduction in the release of toxics into the environment, prevention and reduction programs are especially important."

Under the agreement, Murray Sandblast will seek to eliminate the use of toxic substances from its operations and, where elimination is not possible, seek to use less toxic substances. To further reduce or eliminate the release of toxic substances into the environment, the company will consider alternative production processes such as closed-loop systems, improved plant operations and other technology modifications to maximize in-process reuse, recycling and recovery of materials.

The initial skepticism and reluctance of Murray Sandblast & Paint to change its manufacturing process of auto transport trailers was soon overcome by the realization of immediate savings resulting from minor changes. Robert Pojasek, Vice President of the environmental consulting firm, Geraghty & Miller, Inc., which designed pollution prevention plans for Murray, noted that once upper-management realized the benefits of reducing the use of toxics, they aggressively pursued pollution prevention plans. The process is already producing results, and appears likely to help Murray improve its competitiveness and financial stability.

The use of citizen suit monies to support Local Emergency Planning Committees is another important means of reducing future toxic threats. Responsible under the Act for carrying out both the emergency planning and right-to-know functions of the law, the local committees receive no money from the Federal government.

The opportunity to negotiate innovative settlements which go beyond strictly monetary penalties is a strong characteristic of the right-to-know act. Therefore, those who are most directly affected by the toxic emissions have a voice in the eventual settlement and how the penalty fines are distributed.

The success of Atlantic States in pursuing violators through the courts has captured the attention of polluting industries, by demonstrating that citizens will exercise their enforcement powers under the law. The equally important lesson, however, is that industry can prevent pollution and benefit financially from reducing the use of toxic chemicals, thereby avoiding costly environmental regulation and lawsuits.

Contacts:
Robert Nagel, Atlantic States Legal Foundation (315) 475-1170
Robert Pojasek, Geraghty & Miller, Inc. (508) 794-9470
Charlie Tebbutt, Allen, Lippes, and Shonn, (716) 884-4800

(A list of briefs, complaints, discovery requests and consent decrees filed under EPCRA is available from Jim Hecker, Trial Lawyers for Public Justice, (202) 797-8600. A brief guide to finding non-reporting companies is available from Casey Padgett, Environmental Action Foundation (301) 891-1100.)

Note: In two landmark decisions dated September 3 and September 9, 1991, District Court Judge William Skretny, (WDNY), ruled that companies that fail to report under EPCRA cannot escape citizen suits by filing release reports *after* receiving notice of intent to sue. This important ruling affirms citizen's rights to enforce reporting requirements of the right-to-know law.

Case Study #8

Plume Mapping Reveals Ammonia Danger

Cloverleaf, Texas

Residents of Cloverleaf, Texas, a small town east of Houston, became alarmed when they learned that their town was targeted for a large ammonia storage and distribution facility. Hundreds of families were facing the prospect of living within the shadow of a chemical plant containing over 100,000 gallons of ammonia.

The residents' anxieties escalated to anger when it became known that the plant's proponent, LaRoche Industries, had described their community in it's permit application as characterized by "small, poorly maintained houses...small, junky businesses...and very low quality housing." Residents were outraged at the thought that a company would target their town for an industrial facility because they were a lower-income, blue collar community.

The LaRoche Industries' permit application also contained a map outlining a vulnerability zone in case of a sudden release of ammonia. The map showed that within a radius of one mile at least 1,200 residents would be exposed to deadly ammonia gas. As later evidence would show, the zone of vulnerability had a potential radius of at least three miles in a worst case release scenario.

Alarmed community leaders enlisted the help of Texans United, a 70,000-member citizens' environmental organization, to quickly organize a public meeting to discuss the permit request. Texans United called upon a technical expert, Dr. Fred Millar, director of the Chemical Safety Project at Friends of the Earth, to describe the tremendous catastrophic threat that an ammonia storage facility can pose to a nearby community.

Dr. Millar had uncovered the results of an unpublicized ammonia industry test performed in a Nevada desert in 1983, which measured the potential results of an ammonia accident. The tests revealed that a deadly gaseous cloud would prove 10-to-100-times more dangerous than any previous dispersion modeling had estimated. The Cloverleaf Local Emergency Planning Committee (LEPC) was admittedly unprepared for a disaster of this magnitude.

Dr. Millar pointed out that under the right-to-know law, risk assessments should be conducted by LEPCs. Lack of funding and, in some cases, industry influences, however, were undercutting the effectiveness of LEPCs in publicizing the real exposure threats to the public. "Technical information on the risk of toxic chemical accidents to nearby communities deserves far greater attention by the LEPCs," noted Dr. Millar. "Catastrophic risk assessments can play a major role in the siting and expansion of facilities using toxic chemicals. People have a right-to-know if they live near a potential Bhopal."

Over 200 residents packed a community hall decorated with posters quoting the LaRoche permit descriptions of their town. Karla Land, a Cloverleaf resident and leader of the local opposition, noted that the Texas Air Control Board officials who attended the meeting were probably expecting to smooth things over with a few fearful homeowners. But, as Jim Baldauf, special projects director at Texans United noted, "When they saw the posters and the enormous turnout, they knew they'd walked into a hornets' nest of organized opposition."

The second public meeting resulted in an unexpected victory. Prepared to debate LaRoche Industry and the Texas Air Control Board representatives, community leaders were delighted when LaRoche faxed a letter one hour before the meeting saying it was withdrawing it's application. The Texas Air Control Board officials also declared that they were denying the permit request. Many attribute the remarkable turn around to publicity of the catastrophic risks and the community's well-organized and vocal opposition.

The victory party which ensued marked an historic moment in Texas, as officials admitted that never before in the agency's history had they turned down a permit application. Jim Baldauf of Texans United noted that, "the people of Cloverleaf have demonstrated once again that the power of organized people can defeat the power of organized money."

Contacts:
Karla Land, North Channel Concerned Citizens Against Pollution, (713) 452-1085; Jim Baldauf, Texans United, (713) 529-8038; Dr. Fred Millar, Friends of the Earth, (202) 544-2600

Case Study #9

California Laws Extend Right-to-Know

Arcata, California

Citizens in Arcata, California are combining state and federal laws to combat toxic exposure to communities. Using federal toxics release inventory (TRI) reporting requirements together with two progressive California laws, citizens have filed a lawsuit against a Louisiana-Pacific flakeboard plant. The citizens hope to win reduced toxic emissions from the plant.

The suit alleges that Louisiana-Pacific failed to notify plant neighbors of exposure to potentially unsafe levels of formaldehyde. Under California's Safe Drinking Water and Toxic Enforcement Act of 1986 — commonly called Proposition 65 — companies must actively warn citizens through product labeling, direct mail or other means about potential exposure to unsafe levels of toxics that cause cancer or birth defects.

Louisiana-Pacific's alleged violation of Proposition 65 was exposed when the North Coast Environmental Center and the Clean Air Network took advantage of their right-to-know, supplying an independent environmental engineer with the company's 1989 TRI reports. The engineer's air dispersion modeling concluded that under Proposition 65, Louisiana-Pacific should have warned plant neighbors of exposure to potentially dangerous levels of formaldehyde.

In the course of preparing their suit, the citizens were surprised to learn that Louisiana-Pacific had grossly under-reported its TRI emissions. The company was required under a new California law, the Air Toxics Hot Spots Information and Assessment Act of 1987 — commonly called the "Hot Spots" Act — to conduct special tests to measure its emissions. The Act requires certain high priority facilities to verify emission estimates to the extent technologically feasible.

Louisiana-Pacific's "Hot Spots" tests revealed actual 1989 emissions of 87,000 pounds of formaldehyde, or more than double the amount originally reported to the U.S. EPA. The dramatic discrepancy illustrates an inherent limitation of federal right-to-know, which relies solely on industry's own self-reported emissions estimates.

Despite the inaccuracy of Louisiana-Pacific's emissions data, Andrew Aranno, Coordinator for the Clean Air Network, emphasized the importance of federal TRI data in providing easy access to industry figures at a low cost: "especially for areas which do not have cooperative regulators... right-to-know gives us the facts we need."

Many environmentalists consider California's laws a potent approach to combatting toxic hazards, and yet no other states have followed their example. Proposition 65 and the Toxics Hot Spots Act are warning citizens of potential toxic exposure and prompting businesses to reduce and avoid the use of toxic chemicals.

At this writing, the North Coast Environmental Center and the Clean Air Network are completing a legal "discovery phase," exchanging information with Louisiana-Pacific regarding the suit's claim. During settlement negotiations the plaintiffs intend to emphasize the need to install the best available control technology to reduce formaldehyde emissions, until technology exists to completely eliminate the chemical from the flakeboard manufacturing process.

Contacts:
Andy Alm, North Coast Environmental Center, (707) 822-6918
Andy Aranno, Clean Air Network, (707) 443-1158
David Roe, Environmental Defense Fund, (415) 658-0630

Case Study #10

Ozone Advocates Score Victory

Massachusetts

Activists in Massachusetts have obtained a pledge from the state's largest industrial emitter of ozone destroying chemicals to switch to safer alternatives by 1992. The Raytheon company has pledged not to substitute cancer causing chlorinated solvents or use HCFCs that also destroy the earth's stratospheric ozone shield.

Right-to-know data enabled the Massachusetts Public Interest Research Group (MassPIRG) to identify and target Raytheon with a public accountability campaign. Under the toxics release inventory, Raytheon reported emitting 3.6 million pounds of CFC-113 and methyl chloroform over a two year period (1987-88).

The first step of the campaign was a report by MassPIRG called "Local Error, Global Terror." The report generated extensive press coverage, and

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labelled Raytheon as the state's biggest ozone polluter. Nonetheless, the company showed no signs of making a policy change.

MassPIRG next raised the issue at a Raytheon stockholders meeting, which also generated press coverage. The shareholder resolution pushing for the phase-out was sponsored by the Evangelical Lutheran Church in America. In addition, high school students from Andover, Massachusetts, who had chosen a neighboring Raytheon factory as a topic of concern, attended the meeting, adding petitions and letters that helped propel the company to address the issue.

At a joint press conference with MassPIRG held to announce the new corporate policy, Raytheon spokesperson Frank Marino said that although the company had begun to explore alternatives to their harmful chemicals, MassPIRG's campaign "added an impetus" to the decision to switch. The company has agreed to meet with MassPIRG to report on the progress of their program to develop safer alternatives.

Raytheon currently uses CFC's to clean the 750,000 printed circuit boards it produces annually. The company is testing a water and detergent based alternative.

At present, only three ozone destroying chemicals are listed under the right-to-know law. However, reporting will begin for seven more ozone destroyers in the 1991 calendar year, with the first reports due on July 1, 1992. The Clean Air Act Amendments of 1990 mandates the phase-out of all CFCs by the year 2000, and the phase-out of methyl chloroform by the year 2005.

Contact:
Hillel Gray, National Environmental Law Center, (617) 422-0880

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APPENDIX 4.—LETTER DATED FEBRUARY 18, 1992, FROM BRUCE M. FURINO, GRANTS DEVELOPMENT MANAGER, UNIVERSITY OF CENTRAL FLORIDA

UNIVERSITY OF CENTRAL FLORIDA
DIVISION OF SPONSORED RESEARCH
(407) 823-3778 ORLANDO, FLORIDA 32816-0150 FAX (407) 823-3299

February 18, 1992

The Honorable Bob Wise
Chairman
Sub-Committee on Government Information, Justice
and Agriculture
B-349 C
Rayburn Building
Washington, D.C. 20515

Dear Congressman Wise,

On behalf of those persons who depend upon the availability of federal information sources, thank you for promoting the good work that federal agencies are accomplishing. As you have found, there is an abundance of information which needs and must reach the public. Through your continuing efforts, more agencies will join the ranks of those who are taking giant strides in the creation of cost efficient dissemination strategies.

Attached for your consideration is an overview of how our institution is advancing the use of federal and state information sources. We recognize we are but one of many groups who realize the importance of federal information sources as we explore new packaging techniques relative to the different audiences we serve. On a fairly regular basis, we seem to stumble onto a new information source which we never knew existed. Our most recent find is the excellent work the US Department of Commerce is doing through their on-line "Economic Bulletin Board". Of particular interest is the National Trade Data Bank and the attached listing of Government Bulletin Board Systems. This brings me to one of the reasons I am writing.

There needs to be a more efficient means to alert interested groups to federal information sources which are available. I would like to propose establishing an on-line information system which would provide a current listing of federal information products which are available to the public. Our office has the necessary expertise to design, operate and maintain such a system. We however lack the resources. For such a system to be effective, it would require a 1-800 toll free number with at least five incoming telephone lines. Given our track record in obtaining federal information sources, we have established a rapport with certain federal agencies and with your help could identify additional agencies who have resources to

STATE UNIVERSITY SYSTEM OF FLORIDA AN EQUAL OPPORTUNITY/AFFIRMATIVE ACTION EMPLOYER

share. The system would only identify the type of information which is available, the agency, how it can be obtained and a point of contact for further information. Particulars could be included concerning the information format (i.e. on-line, CD-ROM, disc, or tape), who can access the system, and any costs involved. An important addition could be a report from your office as Chairman of the Sub-Committee on Government Information, Justice and Agriculture as a means of keeping the public abreast of information dissemination issues and policy. This would be an excellent, cost effective vehicle for keeping the public informed and could be made available through libraries, academic institutions, state clearinghouses or by citizens dialing directly into the system (which would be a toll free call). This would be a wonderful opportunity for our institution and one which we would take most seriously. If you have any suggestions on how the proposed could be supported, I would be very interested in learning more.

Concerning a separate issue, as I am sure you have deduced certain agencies are more proactive concerning the dissemination of information than others. GAO produces a monthly publication called "Reports and Testimony". Excerpts from one month's report are attached for your convenience. Their efforts are second to none in the dissemination of individual agencies' reports and testimony concerning federal issues. I have tried upon two different occasions to obtain the abstracts published in the their monthly "Reports and Testimony" publication on disc or some other form of electronic medium, and have been unsuccessful. I wanted to share this information with the agencies we serve so they may determine if they wish to have access to the full reports or testimony, and then order the documents on their own. The abstracts produced are most valuable and serve as a convenient means to transfer information to the public. We would sincerely appreciate your office inquiring as to why our request was declined.

In closing, I wish to acknowledge the time one of your legislative assistants afforded me in a recent telephone conversation. Mr. Bob Galman took time from his busy schedule to enlighten me as to your efforts and update me concerning some current federal information dissemination issues. His insights and comments were quite valuable.

Again, thank you for advocating the continuing dissemination of federal information sources. Through our tax dollars the information is produced and through you continued efforts, federal agencies will understand the importance of disseminating their information sources to the public.

Sincerely,

Bruce M. Furino
Grants Development Manager

THE ECONOMIC BULLETIN BOARD (EBB)

U.S. Department of Commerce
Office of Business Analysis
(202)377-1986

Last Updated:
March 25, 1991

BULLETIN #31 GOVERNMENT BULLETIN BOARDS

This bulletin contain a Selected List of Government Bulletin Board Systems. The EBB provides the list only as a service to its subscribers and cannot guarentee the information. The bulletin boards are sorted according to state.

STATE	Bulletin Board Name/Sponsor	Phone Numbers
DC	ADAIC BBS (ADA Programming) ADA Information Center	Line 1: 202-694-0215 Line 2: 301-459-3865
DC	Automated Library Info. Exchange (ALIX) Fed. Library & Info. Center Comm.	Line 1: 202-707-9656
DC	Bureau of Prisons BBS US Bureau of Prisons	Line 1: 202-272-4545
DC	Commerce Dept. BBS US Dept of Commerce	Line 1: 202-377-1423
DC	DC Government BBS District of Columbia	Line 1: 202-727-6668
DC	DC Info Exchange US Navy	Line 1: 202-433-6639
DC	Economic BBS (fee-based) US Dept. of Commerce	Line 1: 202-377-0433 Line 2: 202-377-3870
DC	Education/OERI BBS US Dept. of Education	Line 1: 202-357-6011 Line 2: 202-357-6012
DC	EIA BBS Energy Information Admin.	Line 1: 202-586-8658
DC	Export-Import Bank of the US	Line 1: 202-566-4699
DC	Export License Status Advisor (ELISA I) US Dept. of Defense	Line 1: 202-697-6109
DC	Export License Status Advisor (ELISA II) US Dept. of Defense	Line 1: 202-697-3632

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DC	FDIC BBS Fed. Deposit Ins. Corp.	Line 1: 202-371-9578
DC	Fed. Highway Administration US Dept. of Transportation	Line 1: 202-366-3764
DC	FERC-CIPS Fed. Energy Regulatory Comm.	Line 1: 202-357-8997
DC	GAO Information Tech. Center General Accounting Office	Line 1: 202-275-1050
DC	GSA - IRSC General Services Admin.	Line 1: 202-535-7661
DC	JAG Net (Navy-legal) US Navy Judge Advocate General	Line 1: 202-325-0748
DC	Justice Dept. BBS US Dept. of Justice	Line 1: 202-898-0318
DC	Megawatts One US Dept. of Energy	Line 1: 301-353-5059
DC	Metro Net US Army Military Dist. of DC	Line 1: 202-475-7543
DC	MINES-DATA SYSTEM US Bureau of Mines	Line 1: 202-634-4637
DC	Minority Energy Info Clearing House US Dept. of Energy	Line 1: 202-586-1561
DC	NADAP BBS US Navy	Line 1: 202-693-3831
DC	NAMARA JAG Net US Navy Judge Advocate General	Line 1: 202-889-9214
DC	NANCI (Naval Aviation News) Naval Aviation News Magazine	Line 1: 202-475-1973
DC	NARDAC - Laser US Navy	Line 1: 202-475-7885
DC	NASA HQ Information Technology Center NASA	Line 1: 202-453-9008
DC	Naval Observatory (1200/E/7/1) US Naval Observatory	Line 1: 202-653-1079
DC	NAVDAC BBS Naval Data Automation Command	Line 1: 202-433-2118

DC	OCRWM - INFOLINK Off Civ Radioactive Waste Mgt	Line 1: 202-586-9359
DC	Science Resourse Studies BBS National Science Foundation	Line 1: 202-634-1764
MD	ALF - Agricultural Library Forum National Agricultural Library	Line 1: 301-344-8510
MD	Census Bureau BBS US Bureau of the Census	Line 1: 301-763-4576
MD	Census Bureau Personnel BBS US Bureau of the Census	Line 1: 301-763-4574
MD	FCC Public Access Link Fed. Communications Commission	Line 1: 301-725-1072
MD	Lipid Nutritional Laboratory US Dept. of Agriculture	Line 1: 301-344-1277
MD	MSG-RBBS David Taylor Naval Res. Ctr.	Line 1: 301-227-1042 Line 2: 301-227-3428
MD	NIST/Data Management Info. Exchange Natl. Inst. for Stds. & Tech.	Line 1: 301-948-2048
MD	NIST/Microcomputer Elect. Info. Exchange Natl. Inst. for Stds. & Tech.	Line 1: 301-948-5717 Line 2: 301-948-5718
MD	NOAA BBS Natl. Ocean. & Atmsph. Admin.	Line 1: 301-770-0069
MD	State Data Cen./Business-Ind. Data Cent. US Bureau of the Census	Line 1: 301-763-1568
VA	Computer Communications Network (CCN) US Dept. of the Navy	Line 1: 703-602-3693
VA	DASC-ZSA Defense Logistics Agency	Line 1: 703-274-5863
VA	Ft. Myer O Club BBS Fort Myer Officers Club	Line 1: 703-524-4159
VA	Geological Survey BBS US Geological Survey	Line 1: 703-648-4168
VA	Natl. Biological Impact Assessment Prog. US Dept of Agriculture	Line 1: 703-231-3858 Line 2: 800-624-2723

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Overview of
The University of Central Florida's (UCF)
Division of Sponsored Research (DSR)
Information/Communication Systems

Mission Statement:

The design, development and operation of UCF/DSR's information/communication infrastructure is an important part of the Division of Sponsored Research's mission. We are reaching out through the use of applied communication technology to forge new relationships with industry, community service organizations, health agencies, local governments, K-12 educational agencies, and institutions of higher education. Each system developed responds to the needs, limitations and aspirations of the intended user community. In the years to come, we will have established a creditable repertoire of successful systems which can be imported to other communities, states and countries.

System Overview:

The following is a synopsis of systems in different stages of development and operation.

I: The Research Information Network (RINNet)

RINNet was originally implemented as a means to electronically distribute research information to our faculty at area campuses and institutes/centers. It has since matured into an initiative involving multiple institutions as it facilitates the distribution of research information and opens the door for future collaborative activities. RINNet brings together the unique and diversified research resources of participating state universities, state agencies and federal research laboratories in the State of Florida into a comprehensive information/communication network. This is a major step toward combining information resources, project management capabilities and communication services into a single, easy to use operating environment.

Our goal is to offer a comprehensive research and technology information source which will:

- enable participating institutions to obtain timely, comprehensive and convenient information concerning federal, state and private research opportunity announcements and funded research,
- allow faculty and administrators from participating institutions the freedom to identify, communicate and collaborate with each other about research,
- facilitate identifying specific faculty and specialized laboratory equipment and facilities that could provide a competitive edge in the development of research proposals,
- alert faculty to national and state conferences, workshops and meetings within specific disciplines, and
- facilitate academic/industry partnerships by providing information on the research interests of Florida companies and SUS faculty.

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At present, the system offers users:

- the Commerce Business Daily (with up to two weeks of current information and a keyword search facility),
- the U.S. Department of Energy's research, equipment and facilities bulletin board,
- the National Institute of Health's Research Bulletin which is a bi-weekly listing of research opportunities,
- the National Science Foundation's Organizational Directory with corresponding telephone numbers,
- the Department of Environmental Regulations' current research directory,
- Small Business Innovation Research Program announcements, and
- a communication utility to permit the sending of messages and conferencing.

Arrangements are currently underway to add additional information from participating institutions, agencies and laboratories. Sources will include the Federal Register, the University of New York's SPIN system (a grants information database), the National Science Foundation's Research Bulletin, data from the Environmental Protection Agency, and technology transfer newsletters from the Federal Laboratory Consortia (FLC) and a host of other agencies.

II: The University/Commerce Connection (UCC)

Given industry's increasing support for research, it is most important for us to establish and maintain a continuing rapport with existing and new businesses. UCC is an excellent communication and information dissemination tool for accomplishing this goal.

UCC was originally offered to tenants of the Central Florida Research Park as part of a pilot project. We are in the process of offering an improved version of the service to any company in Florida. Multiple information sources are updated on a daily basis so as to provide a current, reliable service. As new information sources are identified which businesses/industry are interested in, every effort is made to incorporate the source.

UCC includes the following services:

1. The Commerce Business Daily which can be viewed and/or downloaded for research purposes.
2. Timely electronic announcements concerning the Small Business Innovation Research Program (SBIR) from a growing number of agencies. At present we receive SBIR soliciation topics from all agencies and full solicitation documentation from an increasing number of agencies.
3. Technology Transfer Bulletins and Technical Briefs from agencies such as the Federal Laboratory Consortia (FLC), UCF's Institute for Simulation and Training and the National Technical Information Service (NTIS).
4. UCF's Research Capabilities statements from our departments, colleges and institutes/centers.
5. A mail utility which enables users to electronically communicate with UCF faculty through DSR or request specialized information.

We have recently included the National Institute of Health Research Guide and Navy Domestic Technology Transfer Fact Sheet. We are preparing to incorporate the National Trade Databank into the system which will alert companies to import/export trade opportunities.

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III. The Community Grants Information Network (CGIN)

CGIN is providing community service agencies in the 11th Congressional District with the technology, tools and training to access information related to funding sources and grant applications from federal and state programs and private foundations. CGIN is an electronic/computer network which will allow up to 30 social service agencies, community service agencies and local governments to access information and communication services during a one year pilot project period.

CGIN includes the following resources:

1. Access to federal, state, private and local solicitations which are of interest to participating agencies. Sources include the Federal Register, federally funded projects, socio-economic data, and profiles of agency participants.
2. Access to technical assistance sources such as a listing of the names, addresses and phone numbers of key personnel to contact at the Federal, State and private funding programs.
3. Access to information on grant writing workshops and conferences sponsored by various organizations and government programs throughout the nation.
4. Access to on-line technical assistance regarding grant opportunities. As questions arise concerning new and/or existing grant programs, participants will be able to leave questions on-line with answers available within a 24 hour period.
5. Ability to communicate via an electronic mail/bulletin board with the other agencies participating in CGIN, UCF/DSR and Congressman Jim Bacchus's office. This interactive, communication network will facilitate collaborative efforts in submitting grant applications and other areas of mutual interest.

IV: The Education, Research and Technology Network (ERTNet)

The future of our technical workforce and our local economies is directly dependent upon the number of students who graduate with academic or vocational training in science, math and engineering fields. However the number of graduates in these fields continues to plummet. Although there is finger pointing as to the cause, a major ingredient in the solution is the classroom teacher. Unless we provide educators with the necessary materials, equipment and supplies, the business of graduating a technical workforce will continue to be a serious issue.

ERTNet is designed to provide high school science educators with an information/communication network which gives them the basic information they need to stay current in their fields, abreast of equipment inventories and in touch with experts throughout the state. A recent grant award to develop an environmental health sciences information network will begin the development of ERTNet. In the years to come, other disciplines and grade levels will be accommodated.

FOR ANY ADDITIONAL INFORMATION, PLEASE CONTACT MR. BRUCE FURINO AT UCF/DSR - (407) 823-3778.

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